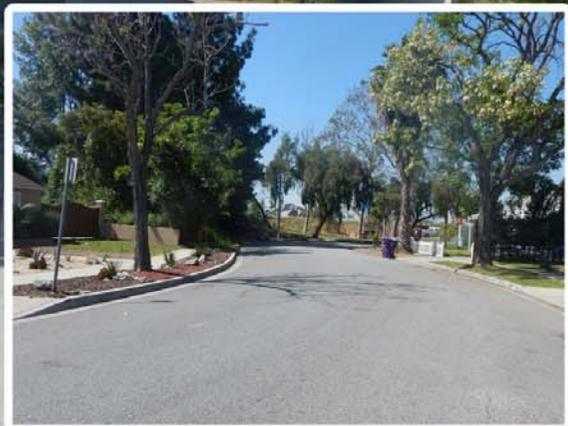


PUBLIC REVIEW DRAFT | JULY 2017



Long Beach Municipal Urban Stormwater Treatment Project

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION



Submitted by:

Michael Baker
INTERNATIONAL

**PUBLIC REVIEW DRAFT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

**Long Beach Municipal Urban
Stormwater Treatment (MUST) Project**

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1.0 INTRODUCTION

The proposed Long Beach Municipal Urban Stormwater Treatment (MUST) Project (herein referenced as the “project”) involves construction of a MUST facility and conveyance facilities to carry urban runoff to the MUST facility for treatment. The project would be situated along the east and west sides of the Los Angeles (LA) River, in the City of Long Beach, and generally extend a distance of approximately 8 miles from State Route 91 (SR-91) to the north to approximately 0.1-mile south of Ocean Boulevard to the south. Following a review of the proposed project, the City of Long Beach has determined that it is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study/Mitigated Negative Declaration addresses the direct, indirect, and cumulative environmental effects of the project, as proposed.

1.1 STATUTORY AUTHORITY AND REQUIREMENTS

In accordance with CEQA (Public Resources Code Sections 21000-21177) and pursuant to Section 15063 of Title 14 of the California Code of Regulations (CCR), the City of Long Beach, acting in the capacity of Lead Agency, is required to undertake the preparation of an Initial Study to determine whether the proposed project would have a significant environmental impact. If the Lead Agency finds that there is no evidence that the project, either as proposed or as modified to include the mitigation measures identified in the Initial Study, may cause a significant effect on the environment, the Lead Agency shall find that the proposed project would not have a significant effect on the environment and shall prepare a Negative Declaration (or Mitigated Negative Declaration) for that project. Such determination can be made only if “there is no substantial evidence in light of the whole record before the Lead Agency” that such impacts may occur (Section 21080, Public Resources Code).

The environmental documentation, which is ultimately approved and/or certified by the City of Long Beach in accordance with CEQA, is intended as an informational document undertaken to provide an environmental basis for subsequent discretionary actions upon the project. The resulting documentation is not, however, a policy document and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and other discretionary approvals would be required.

1.2 PURPOSE

Section 15063 of the CEQA Guidelines identifies specific disclosure requirements for inclusion in an Initial Study. Pursuant to those requirements, an Initial Study shall include:

- A description of the project, including the location of the project;
- Identification of the environmental setting;
- Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries;
- Discussion of ways to mitigate significant effects identified, if any;
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls; and
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study.

1.3 CONSULTATION

As soon as the Lead Agency (in this case, the City of Long Beach) has determined that an Initial Study would be required for the project, the Lead Agency is directed to consult informally with all Responsible Agencies and Trustee Agencies that are responsible for resources affected by the project, in order to obtain the recommendations of those agencies on the environmental documentation to be prepared for the project. Following receipt of any written comments from those agencies, the City of Long Beach will consider their recommendations when formulating the



preliminary findings. Following completion of this Initial Study, the City of Long Beach will initiate formal consultation with these and other governmental agencies as required under CEQA and its implementing guidelines.

1.4 INCORPORATION BY REFERENCE

The following documents were utilized during preparation of this Initial Study, and are incorporated into this document by reference. The documents are available for review at the City of Long Beach Development Services Department, located at 333 West Ocean Boulevard, Long Beach, California 90802.

- *City of Long Beach General Plan (Updated October 2013)*. The purpose of the General Plan is to provide a general, comprehensive, and long-range guide for community decision-making. The *City of Long Beach General Plan (General Plan)* consists of the following elements, adopted on various dates: Historic Preservation; Open Space; Housing; Air Quality; Mobility Element; Land Use; Seismic Safety; Local Coastal Program; Noise; Public Safety; Conservation; and Scenic Routes. The individual elements identify goals and policies for existing and future conditions within the City of Long Beach.
- *City of Long Beach Municipal Code (Codified through Ordinance No. ORD-16-0008, enacted May 24, 2016)*. The *City of Long Beach Municipal Code (LBMC)* consists of regulatory, penal, and administrative ordinances of the City of Long Beach. It is the method the City uses to implement control of land uses, in accordance with the *General Plan* goals and policies. Volume II (Title 20, *Subdivisions*) and Volume III (Title 21, *Zoning*) of the LBMC identifies land uses permitted and prohibited according to the zoning designation of particular parcels. The purpose of the Zoning Regulations within the *LBMC* is to promote and preserve the public health, safety, comfort, convenience, prosperity, and general welfare of the people of Long Beach.



2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

Regionally, the project site is located within the southwestern portion of the City of Long Beach (City), within the County of Los Angeles (County); refer to [Exhibit 2-1, Regional Map](#). Locally, the project site is situated along the east and west sides of the Los Angeles (LA) River, and generally extends a distance of approximately 8 miles from State Route 91 (SR-91) to the north to approximately 0.1-mile south of Ocean Boulevard to the south; refer to [Exhibit 2-2, Site Vicinity Map](#).

2.2 ENVIRONMENTAL SETTING

REGIONAL SETTING

As noted above, the proposed project site is situated along the east and west sides of the LA River. Facilities along the east side of the river are dispersed along an 8 mile corridor from SR-91 on the north, to just south of Ocean Boulevard. Facilities proposed to the west of the river are limited to smaller areas, with one area immediately north of SR-91, west of Interstate 710 (I-710), and east of Long Beach Boulevard, and another area immediately west of I-710, at and along the Long Beach Boulevard bridge over I-710 and the LA River. Generally, the project site and surrounding areas are heavily urbanized and occupied by a range of different land uses.

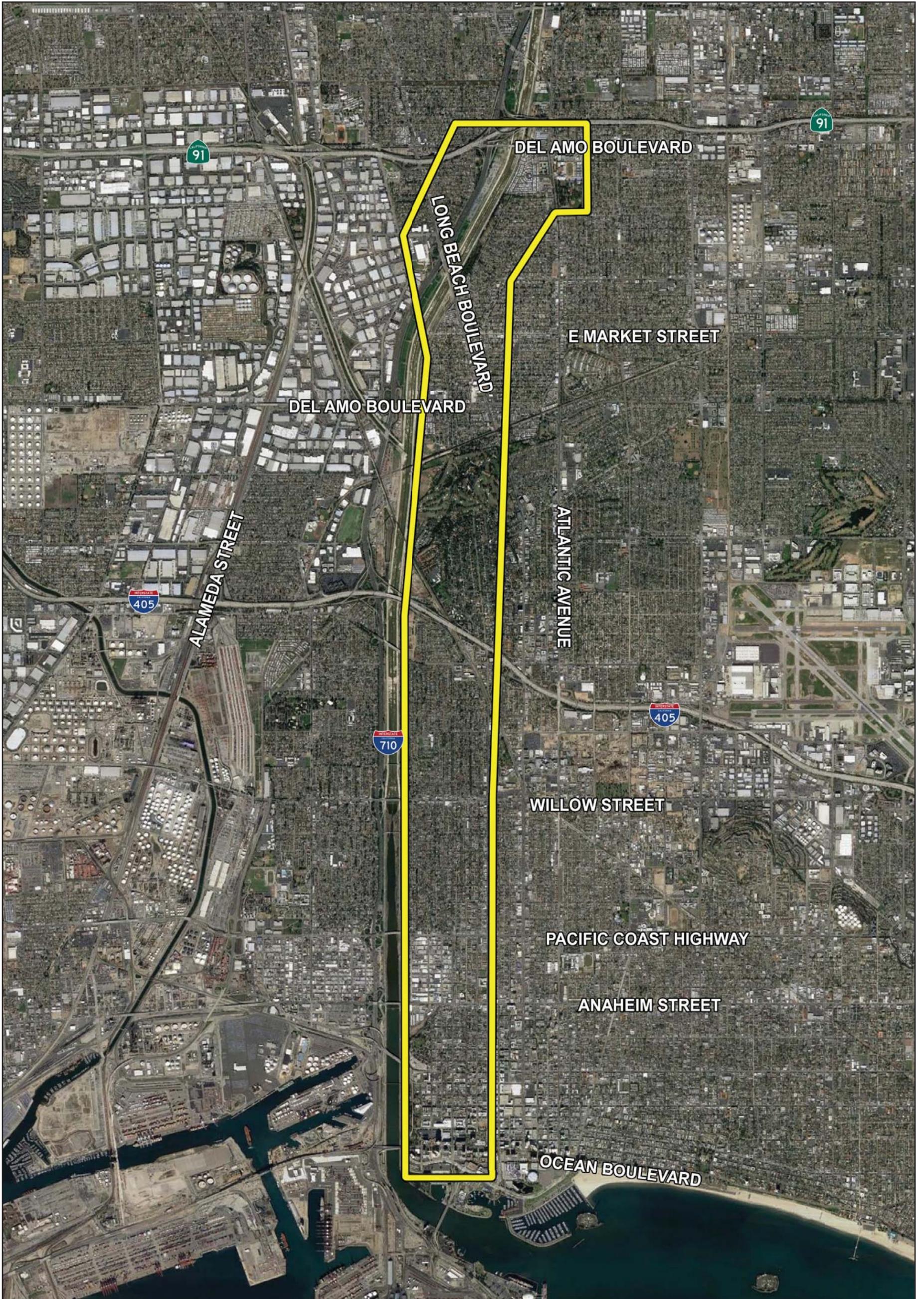
The proposed project includes facilities intended to improve water quality associated with urban runoff in the project area, which ultimately flows into the LA River. The project includes two primary project components: 1) the municipal urban stormwater treatment (MUST) facility; and 2) conveyance facilities/diversion structures to carry urban runoff to the MUST facility for treatment. A detailed description of the proposed project is provided in [Section 2.5, Project Characteristics](#); a description of the existing environmental setting associated with these facilities is provided below. A depiction/overview of the proposed MUST and associated conveyance facilities on a regional basis is provided in [Exhibit 2-3, Project Overview](#).

MUST FACILITY

The MUST facility would be constructed along the east bank of the LA River. The MUST site would occur both north and south of the existing Shoemaker Bridge, on approximately 11.5 acres of vacant City, State, and Southern Pacific Transportation Company owned land. The site is bounded by the river and associated LA River Bicycle Path to the west, Fairbanks Avenue and Shoreline Drive to the east, Cesar E. Chavez Park to the south, Drake Park to the north, and is situated at and adjacent to an existing City pump station (No. SD-01). Currently, the majority of the project site is vacant land/open space with sparse ornamental/non-native vegetation, utility poles, and an advertising/billboard sign. As noted above, City Pump Station No. SD-01 is located within the central portion of the MUST site. The MUST site has been previously disturbed, graded, and the topography is generally flat; refer to [Exhibits 2-4a through 2-4c, Project Components](#), for the MUST facility location.

CONVEYANCE FACILITIES

A range of conveyance facilities, totaling approximately 25,780 feet (approximately 4.88 miles) in length, are proposed to carry urban runoff to the MUST facility. The project would include a combination of the construction of new conveyance facilities (in the form of underground pipelines and open channel facilities), in addition to utilization of existing City pipelines to create the necessary connection between tributary areas in the region and the MUST. Where existing pipelines are incorporated to convey project flows, no improvements, ground disturbance, or other activities would be required (i.e., the existing pipelines would remain in their existing state).



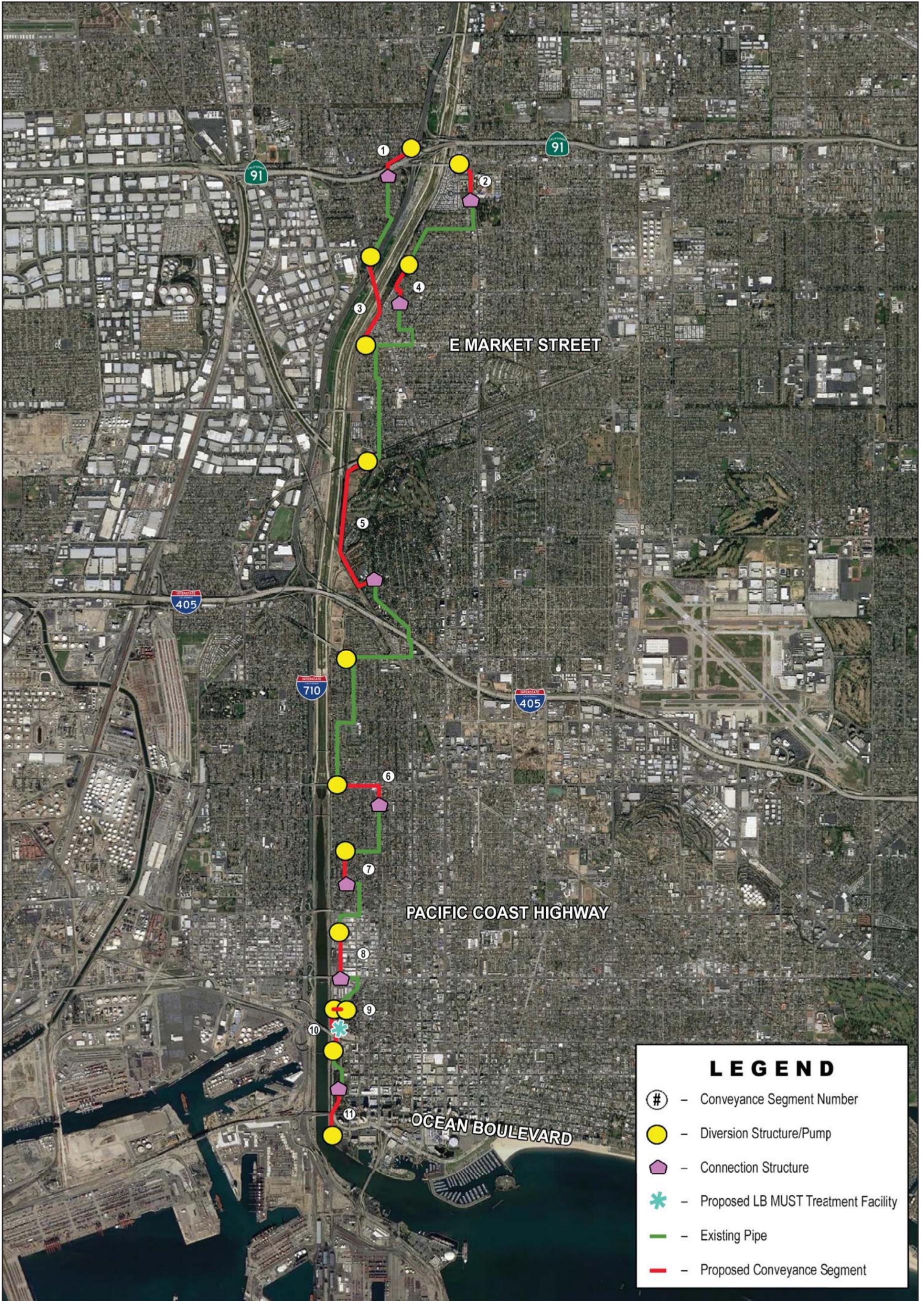
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Source: Google Earth, 2017.

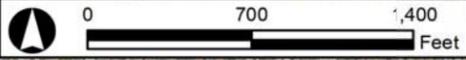
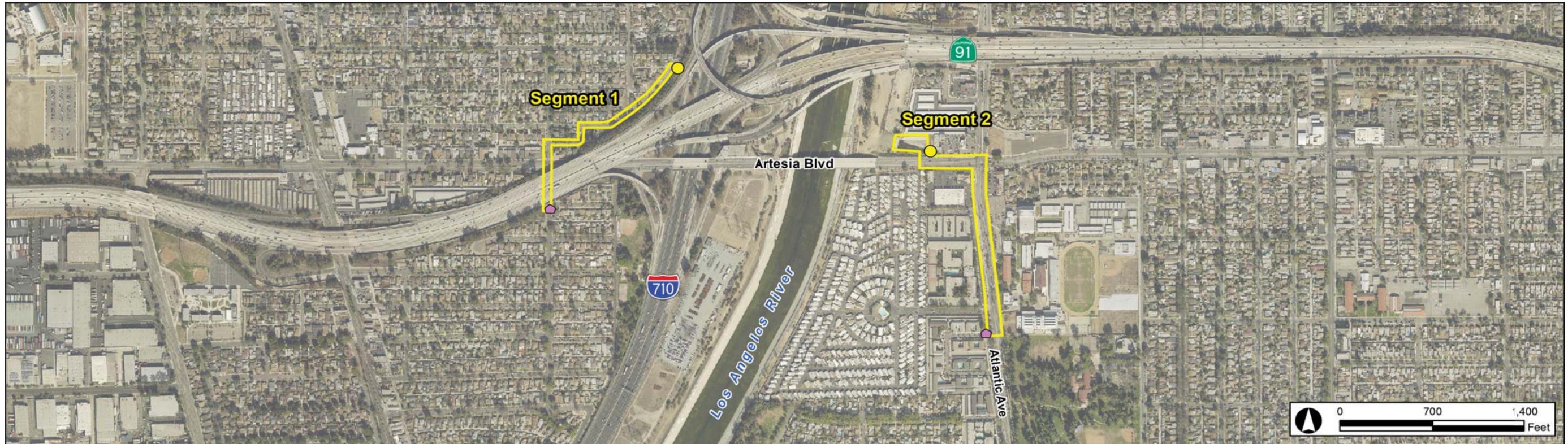
LEGEND

- # - Conveyance Segment Number
- Diversion Structure/Pump
- Connection Structure
- * - Proposed LB MUST Treatment Facility
- Existing Pipe
- Proposed Conveyance Segment

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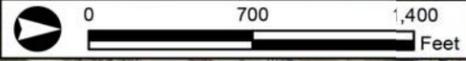


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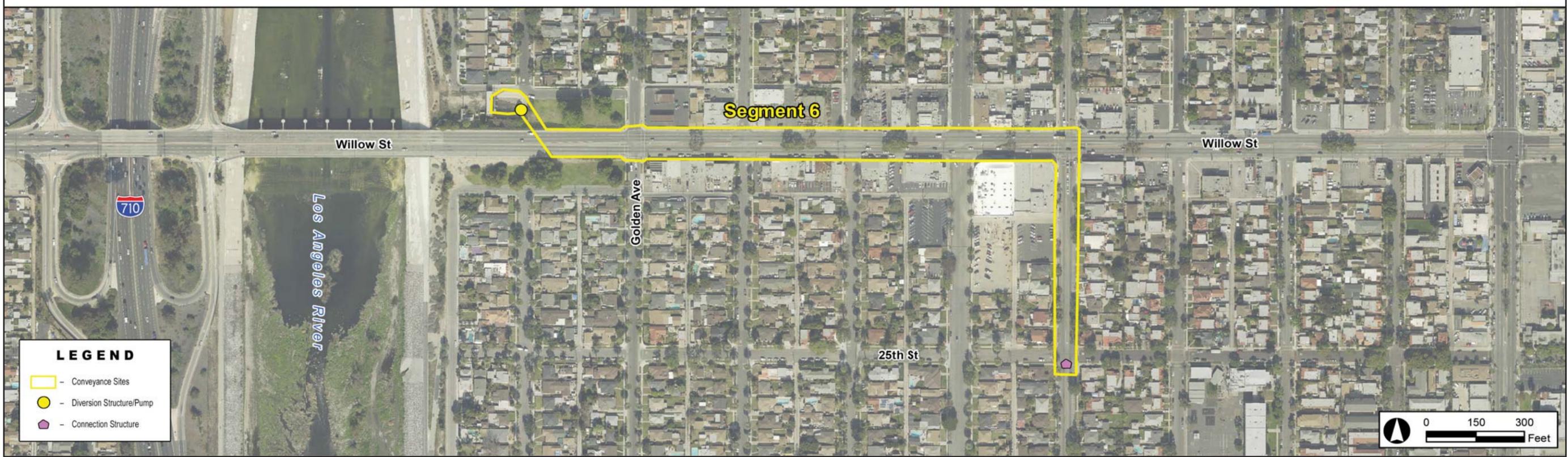
LEGEND

- Conveyance Sites
- - Diversion Structure/Pump
- ◆ - Connection Structure



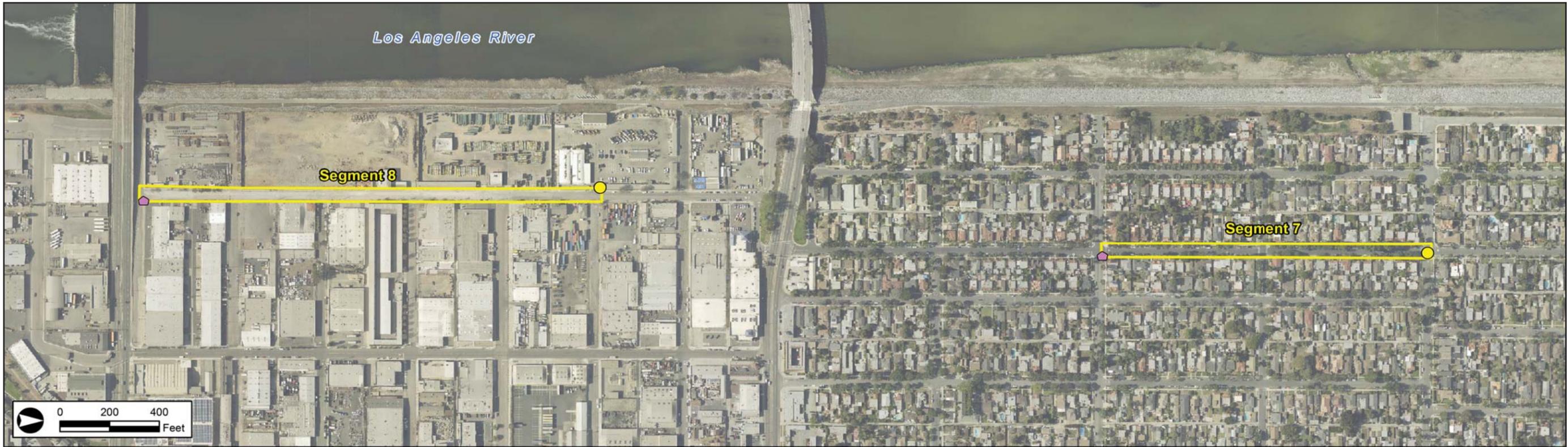


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The project includes a total of 11 non-contiguous segments of proposed conveyance improvements. The existing setting for these 11 proposed segments is provided below, and their locations are depicted in [Exhibits 2-4a](#) through [2-4c](#).

- Segment 1: Segment 1, the most northerly of the conveyance segments, runs along Coachella Avenue (approximately 150 feet south of East 67th Way) to the north and continues in a southwest direction along East Maker Street, Artesia Lane, and Butler Avenue, terminating at Butler Avenue and East Coolidge Street. Coachella Avenue, East Maker Street, Artesia Lane, and Butler Avenue are two lane roadways with limited striping located within a residential area. This approximately 1,650 foot long conveyance segment would occur entirely within existing City roadway right-of-way (ROW).
- Segment 2: At its northerly terminus, Segment 2 begins at the City's No. SD-12 Pump Station facility located north of East Artesia Boulevard. The proposed conveyance segment would head east on East Artesia Boulevard, and then in a southerly direction along Atlantic Avenue, terminating approximately 140 feet south of Aloha Drive. East Artesia Boulevard and Atlantic Avenue are four lane roadways with Class II Bike Lanes and raised center medians. This approximately 1,750 foot long conveyance segment would occur entirely within existing City roadway ROW.
- Segment 3: At its northerly terminus, Segment 3 begins at the City's No. SD-11 Pump Station facility (parcel owned by HB LLC), located south of East Gordon Street, and runs approximately 0.5-mile in a southerly direction along Long Beach Boulevard and its associated bridge over I-710 and the LA River. At the southerly terminus of the Long Beach Boulevard bridge, the alignment would proceed in a southwesterly direction within vacant Los Angeles County Flood Control District property and City ROW, until it would turn in an easterly direction along West Market Street, to where it terminates at West Market Street and North Pacific Avenue. Long Beach Boulevard is generally a four lane roadway with a raised center median. West Market Street is a two lane roadway located within a residential area. This segment is approximately 4,500 feet long.
- Segment 4: At its northerly terminus, Segment 4 begins approximately 135 feet south of East Osgood Street along De Forest Avenue, heading in a southerly direction until it turns into Chestnut Avenue, and ends at Chestnut Avenue and Jaymills Avenue. De Forest Avenue/Chestnut Avenue are two lane roadways located within a residential area. This approximately 1,660 foot long segment would occur entirely within City roadway ROW.
- Segment 5: At its northerly terminus, Segment 5 begins approximately 525 feet west of West 47th Street and extends in a southwesterly direction, parallel to existing railroad ROW and north of the Virginia Country Club (this portion of Segment 5 would be within private property owned by the Virginia Country Club and public ROW including land owned by the City and Los Angeles County Flood Control District). The alignment then proceeds in a southerly direction along the easterly side of the LA River, within existing public ROW (Los Angeles County Flood Control District). This segment would continue south within Los Angeles County Metropolitan Transportation Authority (LACMTA) ROW, parallel to Virginia Vista Court, and within Del Mar Avenue until it turns in a northeast direction within West San Antonio Drive and ends at the intersection of West San Antonio Drive and Country Club Drive. Del Mar Avenue and West San Antonio Drive are two lane roadways located within a residential area. This segment would be approximately 6,440 feet long.
- Segment 6: Segment 6 begins at the City's No. SD-06 Pump Station facility located north of West Willow Street and travels east along West Willow Street to Magnolia Avenue. At Magnolia Avenue, Segment 6 extends south and terminates at the intersection of Magnolia Avenue and West 25th Street. West Willow Street is a four lane roadway with street parking and a raised center median. Magnolia Avenue is a two lane roadway with a striped center median. This approximately 2,300 foot long conveyance segment would occur entirely within existing City ROW.



- Segment 7: Segment 7 extends along Golden Avenue in a north to south direction from West Hill Street on the north to West 20th Street on the south. Golden Avenue is a two lane roadway located within a residential area. This approximately 1,300 foot long conveyance segment would occur entirely within existing City ROW.
- Segment 8: Segment 8 extends along San Francisco Avenue in a north to south direction from West 17th Street on the north to Anaheim Street on the south. San Francisco Avenue is a two lane roadway located within an industrial area. This approximately 1,850 foot long conveyance segment would occur entirely within existing City ROW.
- Segment 9: Segment 9 begins at the City's No. LA-2 Pump Station and extends in an easterly direction across City-owned vacant land and ends at Loma Vista Drive. Loma Vista Drive is an unstriped two lane roadway in a residential area. This segment is approximately 480 feet long.
- Segment 10: Segment 10 begins at the City's No. LA-2 Pump Station and extends in a southerly direction along Fairbanks Avenue to the MUST facility. Within this approximately 1,800 foot long segment, Fairbanks Avenue is a two lane roadway with no striping. Segment 10 would occur within State, City, Los Angeles County Flood Control District ROW, as well as property owned by Southern Pacific Transportation Company.
- Segment 11: Segment 11 represents the most southerly of the conveyance segments. It begins at the southern boundary of the MUST facility project site, approximately 820 feet south of the City's Pump Station No. SD-01. This segment travels in a southerly direction, within the green belt located west of West Shoreline Drive. Segment 11 extends southerly beneath West Ocean Boulevard and parallel to the LA River Bicycle Path and terminates at the City's No. LA-01 Pump Station located at the Golden Shore RV Resort (located at 101 Golden Shore). This segment is approximately 2,655 feet long and occurs within City and Los Angeles County Flood Control District ROW, as well as property owned by South Pacific Transportation Company and Union Pacific Rail Road.

SURROUNDING USES

MUST Facility

Land uses surrounding the proposed MUST site include vacant land/open space to the north, commercial land uses to the east, West Shoreline Drive and Cesar E. Chavez Park to the south, and the LA River and associated bicycle path to the west.

Conveyance Facilities

Land uses surrounding each of the proposed conveyance segments consist of:

- Segment 1: Residential, transportation, and open space land uses.
- Segment 2: Transportation, commercial, vacant, residential, institutional, and recreational land uses.
- Segment 3: Transportation, residential, commercial, open space, and water land uses.
- Segment 4: Transportation, residential, open space, and recreational land uses.
- Segment 5: Transportation, residential, recreational, institutional, and water land uses.
- Segment 6: Transportation, residential, open space, and commercial land uses.
- Segment 7: Transportation and residential land uses.
- Segment 8: Industrial and commercial land uses.
- Segment 9: Open space, recreational, residential, transportation, and industrial land uses.
- Segment 10: Open space, vacant, recreational, residential, transportation, industrial, and commercial land uses.
- Segment 11: Open space, recreational, transportation, and commercial land uses.



2.3 EXISTING GENERAL PLAN AND ZONING

MUST FACILITY

According to the *City of Long Beach General Plan (General Plan) Land Use Map*, the project site is designated as "LUD 9R; Restricted Industry," "LUD 11; Open Space/Parks," and "LUD 7; Mixed Use." According to the *General Plan Land Use Element*, the Restricted Industry land use "is intended to attract and maintain businesses which conduct industrial or manufacturing operations primarily indoors, with limited outdoor appurtenant activities." The Open Space land use designation includes parks, plazas, promenades and boardwalks, vacant lots, cemeteries, community gardens, golf courses, beaches, flood control channels and basins, rivers and river levees, utility rights-of-way (e.g. transmission tower areas), oil drilling sites, median strips and back up lots, offshore islands, marinas, inland bodies of water, the ocean, estuaries and lagoons. The Mixed Use land designation is intended to be "a careful blending of different types of land uses (designed to) save time and energy in transportation and communications, simplify and shorten transactions of goods and services, vitalize a site, and give it more importance in the urban structure of the City." According to the *General Plan*, the uses intended by this district are employment centers, such as retail, offices, medical facilities; higher density residences; visitor-serving facilities; personal and professional services; or recreational facilities. Surrounding areas to the project site are designated "LUD 4; High Density Residential," "LUD 7; Mixed Uses," and "LUD 11; Open Space/Parks" by the Land Use Map.

The *City of Long Beach Zoning Map* zones the project site as "IL; Light Industrial," "PD-21, Planned Development, Queensway Bay," and "PD-30, Planned Development, Downtown Long Beach." Based on the *City of Long Beach Municipal Code (LBMC)*, Light Industrial zoning "allows a wide range of industries whose primary operations occur entirely within enclosed structures and which pose limited potential for environmental impacts on neighboring uses." The Queensway Bay Planned Development Plan provides a flexible planning mechanism that allows mixed-use development to be built incrementally over time that is consistent with the intent of the Legislative grants of tide and submerged lands to the City of Long Beach and with the Port's Master Plan. The Downtown Long Beach Planned Development Plan is based on "form-base code," which changes the focus from traditional regulation characterized by a list of permitted uses to the design and character of the buildings and how they contribute to defining and activating the nearby public realm. The Plan includes the following topics: vision, connectivity and character, development standards, design standards, streetscape and public realm standards, sign standards, historic preservation, and plan administration.

Surrounding areas to the project site are zoned "PD-10; Planned Development, Wilmore City," "PD-21; Planned Development, Queensway Bay," and "PD-30; Planned Development, Downtown Long Beach."

CONVEYANCE FACILITIES

Given the wide geographical area spanned by the conveyance facilities, the proposed conveyance segments traverse a wide range of *General Plan* land use designations and *LBMC* zoning designations. [Table 2-1, Conveyance Facilities – General Plan Land Use and Zoning Designations](#), provides a summary of the existing land use designations and zoning for the conveyance facilities.

2.4 PROJECT BACKGROUND

The City of Long Beach is situated at the confluence of the LA River. Currently, substantial quantities of pollutants (metals, bacteria, hydrocarbons, pesticides, and trash) enter the LA River via urban runoff and accumulate in the Long Beach Harbor. Runoff includes water draining from urban uses such as streets, parking lots, driveways, and lawns which flows through the storm drain system. Pollutants from residential, industrial, and other urban activities continue to impair the water quality of the river and the Long Beach Harbor.



Table 2-1
Conveyance Facilities – General Plan Land Use and Zoning Designations

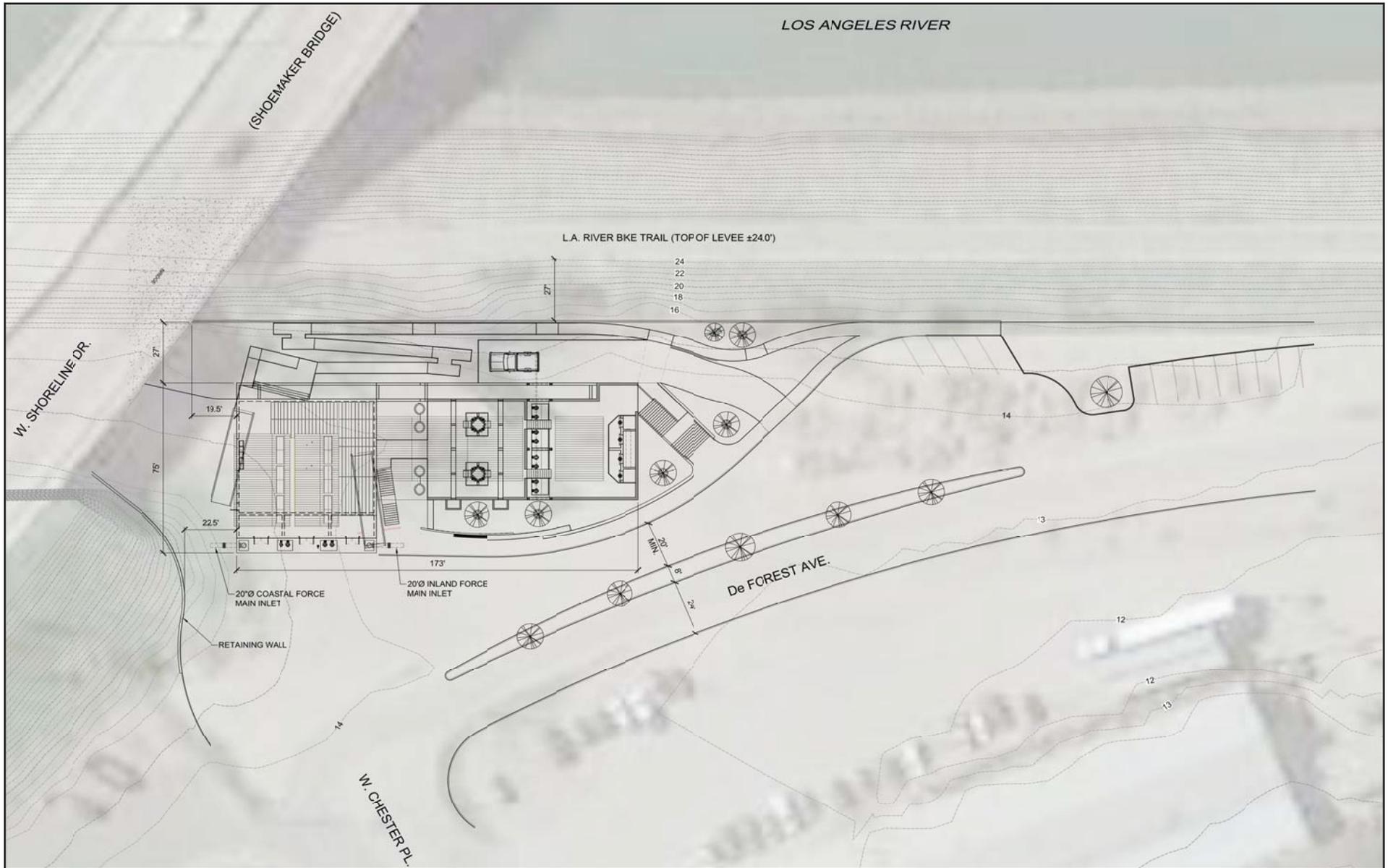
General Plan Land Use		Zoning			
1	Single Family	CCA	Community Commercial Automobile-Oriented	R-2-N	Two-Family Residential, Standard Lot
2	Mixed Style Homes	CNA	Neighborhood Commercial Automobile-Oriented	R-4-N	Medium-Density Multiple Residential
3A	Townhomes	I	Institutional	RM	Mobile Homes, Modular and Manufactured Residential
4	High Density Residential	IG	General Industrial	R-4-R	Moderate-Density Multiple Residential
7	Mixed Use	IL	Light Industrial		
8A	Traditional Retail Strip Commercial	P	Park		
8N	Shopping Nodes	PD-6 (2)	Planned Development, Downtown Shoreline		
9G	General Industry	PD-10	Planned Development, Wilmore City		
9R	Restricted Industry	PD-30	Planned Development, Downtown Long Beach		
10	Institutions/Schools	PR	Public Right-of-Way		
11	Open Space/Parks	R-1-L	Single-Family Residential, Large Lot		
13	Right-of-Way	R-1-N	Single-Family Residential, Standard Lot		

After taking these factors into consideration, the City has proposed the MUST Project. The MUST facility would divert and treat urban runoff from tributary areas in the project area that would otherwise discharge into the LA River. The proposed MUST facility would provide a solution to meeting clean water mandates, as required under the National Pollutant Discharge Elimination System (NPDES) Permits, as well as under the LA River Total Maximum Daily Load (TMDL) requirements, which are overseen by the Los Angeles Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), and the U.S. Environmental Protection Agency (USEPA) under the Clean Water Act. The project would also result in the creation of approximately five acres of wetland/riparian habitat, utilizing grant funding provided by the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC).

2.5 PROJECT CHARACTERISTICS

MUST FACILITY

As noted above, the proposed MUST facility would be constructed along the east bank of the LA River on an approximately 11.5-acre site near the existing Shoemaker Bridge and City Pump Station No. SD-01. The MUST would receive 100 percent of non-stormwater runoff and a portion of “first flush” flows during a storm event. The primary components of the proposed MUST facility would include: 1) pretreatment wetlands; 2) the treatment facility; and 3) a storage/polishing pond. These facilities are described in greater detail below, and a concept plan is depicted in [Exhibit 2-5, MUST Facility Concept Plan](#). It is anticipated that two shifts of three operators would be employed Monday through Friday and two shifts of two operators would be employed Saturday and Sunday. It should be noted that the MUST facility and its proposed water features (i.e., pretreatment wetlands and storage pond) may become an integrated component of an expansion/improvement of Cesar E. Chavez Park (a separate project under development by the City’s Parks, Recreation, and Marine Department). The City is currently reviewing concepts to integrate existing and potential uses at and surrounding the park, to consolidate and unify different components into a compatible plan.



Source: Koa Consulting; June 9, 2017.

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LONG BEACH MUST PROJECT
 INITIAL STUDY / MITIGATED NEGATIVE DECLARATION
MUST Facility Concept Plan

Exhibit 2-5



Pretreatment Wetlands

The proposed MUST facility would include a terminal wetland treatment process that would remove nutrients, total suspended solids (TSS), and particulates prior to entering the treatment plant. Pollutants would be removed via natural biological, physical, and chemical means as they travel through the wetland to the treatment plant. Flows would enter the pretreatment wetlands via a distribution outfall into a forebay, travel through wetland vegetation/soils and open water areas, and ultimately be conveyed to the treatment facility. The pretreatment wetlands would also serve as a park/water feature amenity, resulting in an improvement in recreational opportunities and aesthetics in the project area. Direct contact with the pretreatment wetlands (e.g., bathing, swimming, etc.) would be prohibited.

Treatment Facility

From the pretreatment wetlands, the water would be conveyed to a centralized mechanical treatment facility for water treatment that utilizes physical, biological, and chemical principles to remove contaminants from the water to achieve compliance with Total Maximum Daily Loads (TMDLs). The treatment plant would be designed to intake the 2.0 million gallons per day (MGD) or 1,400 gallons per minute (gpm) flows and process them at the treatment facility as follows:

1. Turbidity I – debris removal;
2. Turbidity II – fine suspended solids removal;
3. Oxidation I – trace contaminants removal;
4. Oxidation II = dissolved organics removal;
5. Oxidation III– dissolved nutrients removal;
6. Turbidity III – bio sludge/finn removal;
7. Disinfection/Post Oxidation; and
8. Mineral Removal.

By processing the waste water streams through these steps, the project treatment goals will be obtained including clear, clean water with low organics, nutrients, heavy metals, and pathogens. The treatment facility would use a proposed treatment train process with bar racks and chopper pumps within the upstream diversion systems, successive strainers at the upstream end of the treatment facility, ozone/peroxide advanced oxidation, coagulant addition for phosphorus removal if required, biologically activated carbon filtration, and final recycled water storage and chlorine disinfection.

The majority of process equipment associated with the treatment facility would be enclosed within a multi-level, 30-foot high, 10,000 square-foot building. The proposed building and associated facilities would include contemporary architectural features, and would include both landscape and hardscape improvements. Parking would be provided on-site within the northern portion of the facility for employees and visitors, with access to the facility provided via Fairbanks Avenue.

The MUST facility would be open to visitors and for educational tours/opportunities for the public to gain an understanding of the environmental benefits of the project and importance of maintaining water quality within the project area. As such, public viewing/gathering areas, seating, and shade structures would be provided; refer to [Exhibit 2-6, *Conceptual MUST Facility Renderings*](#). In addition, the MUST facility would include restroom facilities that would be open to the public from 8:00 a.m. to 5:00 p.m.

Storage Pond

The MUST facility would include a storage/polishing pond, which would represent the final step in the treatment process prior to discharge into the LA River. The storage pond would include additional pollutant removal via biofiltration, aeration, wetlands, and the addition of aluminum for polishing. The storage pond would also serve as a park/water feature amenity, resulting in an improvement in recreational opportunities and aesthetics in the project area. Direct contact with the storage pond (e.g., bathing, swimming, etc.) would be prohibited.



Aerial view looking south.



Southwesterly view of main stairs.



Southwesterly view of main entry.



Northwesterly view from the Los Angeles River levee.



As a potential future option associated with the proposed project, treated water from the MUST facility may be utilized as recycled water for non-potable uses. The use of the MUST facility to provide recycled water would fulfill a need for a recycled water source in the western portion of the City. Additional conveyance/distribution facilities would be required for this to occur; any such improvements would occur as part of a separate project analyzed in a stand-alone environmental document, and are not analyzed herein.

CONVEYANCE FACILITIES

The proposed project would include underground conveyance facilities that would divert existing urban runoff from discharge points along the LA River, within the approximately 19-square mile watershed, and convey them to the MUST facility for treatment. Section 2.2, *Environmental Setting*, above provides a description of the location of each of the proposed segments of new conveyance facilities. The conveyance facilities would connect a number of proposed diversion structures/pumps and connection structures that would be required to convey urban runoff to the MUST facility. A description of the conveyance facilities proposed as part of the project is provided below.

Diversion Structures/Pumps

A number of proposed diversion structures/pumps would be required to divert urban runoff from existing outfalls to the LA River, and redirect them to the MUST facility. The proposed diversion structures would be constructed entirely underground. Primary components would include a sump/grit chamber with submersible 10 horsepower pump, presettling/sedimentation storage, manholes, and access facilities such as manhole covers and ladders. The dimensions of each diversion structure/pump facility would approximately 15 feet by 15 feet by 20 feet deep. Refer to Exhibit 2-4a through 2-4c, for a depiction of the location of proposed diversion structures/pumps.

Conveyance Pipelines/Channels

As noted above, a total of 11 segments of conveyance facilities would be required for the project. The location of all proposed conveyance facilities is shown in Exhibit 2-4a through 2-4c. The majority of conveyance segments would be constructed entirely underground as 4-inch to 12-inch high density polyethylene (HDPE) pipelines within existing City roadway ROW or easements, and installed via open cut trenching. However, a number of segments (or portions thereof) may be constructed as open channel facilities with pocket wetlands/ponds, providing several benefits including biofiltration, pretreatment, and recreational/aesthetic enhancements in the site vicinity. Open channel segments would generally be a vegetated channel with the naturalized appearance of a meandering stream system, with accompanying elements such as rock riffles, pools, and cobbled areas with an irregular cross section.

2.5.1 PHASING AND CONSTRUCTION

Construction of the project is anticipated to occur in two phases, commencing in 2018 and concluding in 2021. The first phase would include construction of the MUST facility and the conveyance facilities south of SR-91. Construction of the first phase would take approximately two years. The second phase would include construction of the conveyance facilities north of SR-91. Construction activities for the second phase are anticipated to take two years to complete.

2.6 PERMITS AND APPROVALS

The proposed project would require permits and approvals from the City of Long Beach and other agencies prior to construction. These permits and approvals are described below, and may change as the project entitlement process proceeds.



City of Long Beach

- California Environmental Quality Act Clearance
- Site Plan Review
- Building Permit
- Local Coastal Development Permit (limited to project components in the Coastal Zone)
- Los Angeles County Flood Control District (approval for connections to existing pump stations)

Los Angeles Regional Water Quality Control Board

- NPDES Construction General Permit



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3.0 INITIAL STUDY CHECKLIST

3.1 BACKGROUND

1.	Project Title: Alamitos Generating Station Battery Energy Storage System (BESS) Project
2.	Lead Agency Name and Address: City of Long Beach 333 West Ocean Boulevard Long Beach, CA 90802
3.	Contact Person and Phone Number: Mr. Craig Chalfant Senior Planner 562.670.6368
4.	Project Location: Regionally, the project site is located within the southwestern portion of the City of Long Beach (City), within the County of Los Angeles (County). Locally, the project site is situated along the east and west sides of the Los Angeles (LA) River, and generally extends a distance of approximately 8 miles from State Route 91 (SR-91) to the north to approximately 0.1-mile south of Ocean Boulevard to the south.
5.	Project Sponsor's Name and Address: Mr. Alvin Papa City of Long Beach Public Works Department 333 West Ocean Boulevard Long Beach, CA 90802
6.	General Plan Designation: According to the <i>City of Long Beach General Plan (General Plan) Land Use Map</i> , the MUST site is designated as "LUD 9R; Restricted Industry," "LUD 11; Open Space/Parks," and "LUD 7; Mixed Use." The <i>General Plan Land Use Map</i> (revised October 2012) designates the project site as "LUD No. 7; Mixed Uses". Refer to <u>Table 2-1, <i>Conveyance Facilities – General Plan Land Use and Zoning Designations</i></u> , for land use designations for the conveyance sites.
7.	Zoning: The <i>City of Long Beach Zoning Map</i> zones the project site as "IL; Light Industrial," "PD-21, Planned Development, Queensway Bay," and "PD-30, Planned Development, Downtown Long Beach." Refer to <u>Table 2-1, <i>Conveyance Facilities – General Plan Land Use and Zoning Designations</i></u> , for zoning designations for the conveyance sites.
8.	Description of the Project: The City of Long Beach is situated at the confluence of the LA River. Currently, substantial quantities of pollutants (metals, bacteria, hydrocarbons, pesticides, and trash) enter the LA River via urban runoff and accumulate in the Long Beach Harbor. Runoff includes water draining from urban uses such as streets, parking lots, driveways, and lawns which flows through the storm drain system. Pollutants from residential, industrial, and other urban activities continue to impair the water quality of the river and the Long Beach Harbor. The proposed Long Beach MUST Project (project) would divert and convey dry-weather and "first flush" storm flows to the treatment facility prior to discharge into the LA River, resulting in water quality benefits in the project area. Additional details regarding the project are provided in <u>Section 2.5, <i>Project Characteristics</i></u> .



9. Surrounding Land Uses and Setting: Land uses surrounding the proposed MUST site include vacant land/open space to the north, commercial land uses to the east, West Shoreline Drive and Cesar E. Chavez Park to the south, and the LA River and associated bicycle path to the west.

Land uses surrounding each of the proposed conveyance segments consist of:

- Segment 1: Residential, transportation, and open space land uses.
- Segment 2: Transportation, commercial, vacant, residential, institutional, and recreational land uses.
- Segment 3: Transportation, residential, commercial, open space, and water land uses.
- Segment 4: Transportation, residential, open space, and recreational land uses.
- Segment 5: Transportation, residential, recreational, institutional, and water land uses.
- Segment 6: Transportation, residential, open space, and commercial land uses.
- Segment 7: Transportation and residential land uses.
- Segment 8: Industrial and commercial land uses.
- Segment 9: Open space, recreational, residential, transportation, and industrial land uses.
- Segment 10: Open space, vacant, recreational, residential, transportation, industrial, and commercial land uses.
- Segment 11: Open space, recreational, transportation, and commercial land uses.

10. Other public agencies whose approval is required (e.g., permits, financing approval or participation agreement).

Refer to Section 2.6, Permits and Approvals, for a description of the permits and approvals anticipated to be required for the project. Additional approvals may be required as the project entitlement process moves forward.



3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less Than Significant Impact with Mitigation Incorporated," as indicated by the checklist on the following pages.

✓	Aesthetics		Mineral Resources
	Agriculture and Forestry Resources	✓	Noise
✓	Air Quality	✓	Population and Housing
✓	Biological Resources		Public Services
✓	Cultural Resources		Recreation
	Geology and Soils	✓	Transportation/Traffic
	Greenhouse Gas Emissions	✓	Tribal Cultural Resources
✓	Hazards and Hazardous Materials		Utilities and Service Systems
	Hydrology and Water Quality	✓	Mandatory Findings of Significance
	Land Use and Planning		

3.3 LEAD AGENCY DETERMINATION

On the basis of this initial evaluation:

The City of Long Beach finds that the proposed use COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. _____

The City of Long Beach finds that although the proposal could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described in Section 4.0 have been added. A MITIGATED NEGATIVE DECLARATION will be prepared. ✓ _____

The City of Long Beach finds that the proposal MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. _____

The City of Long Beach finds that the proposal MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. _____

Signature

Craig Chalfant, Senior Planner

Printed Name

City of Long Beach

Agency

July 28, 2017

Date



3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Initial Study include:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities and Service Systems

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines* and used by the City of Long Beach in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- No Impact. The development will not have any measurable environmental impact on the environment.
- Less Than Significant Impact. The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.
- Less Than Significant Impact With Mitigation Incorporated. The development will have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- Potentially Significant Impact. The development will have impacts which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.



4.0 ENVIRONMENTAL ANALYSIS

The following is a discussion of potential project impacts as identified in the Initial Study. Explanations are provided for each item.

4.1 AESTHETICS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?			✓	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			✓	
c. Substantially degrade the existing visual character or quality of the site and its surroundings?		✓		
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?		✓		

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. The Scenic Routes Element of the *General Plan* identifies freeways, regional corridors, boulevards, major avenues, minor avenues, neighborhood connectors, local streets, port-related streets, scenic routes including bicycle trails and railroad right-of-way (linkages), and scenic assets. The ocean, port facilities, oil islands, Signal Hill, and the flood control channels are identified as vistas in the City of Long Beach. The project proposes to construct a MUST facility and 11 conveyance facilities along the Los Angeles (LA) River, north of State Route 91 (SR-91) to Golden Shore RV Resort located at 101 Golden Shore. The nearest designated scenic routes to the project site include Ocean Boulevard, Long Beach River Bicycle Path (also known as the Westside Linkage), Pacific Electric Railroad (also known as the Crosstown Linkage), and Union Pacific Railroad (also known as the Central Linkage). The primary scenic resources for vehicles traveling along Ocean Boulevard and bicyclists and pedestrians traveling along the Long Beach River Bicycle Path within the project vicinity generally include the LA River to the north and south, City views to the east, and industrial views to the west. The primary scenic resources for passengers traveling on the Pacific Electric Railroad within the project vicinity include the LA River to the north and south. The primary scenic resources for passengers traveling on the Union Pacific Railroad within the project vicinity include the LA River to the north and south and the Virginia Country Club to the south.

Long-Term Impacts

The Long Beach River Bicycle Path generally travels in a north to south direction. Bicyclists and pedestrians traveling south along the bicycle path within the project vicinity generally have a view of the LA River, City skyline, and industrial views. Bicyclists and pedestrians traveling north along the bicycle path within the project vicinity generally have a view of the LA River as well as the proposed MUST facility. Refer to Table 4.1-1, Segments within the Vicinity of a Scenic Route, for a description of project segments, in addition to the MUST facility, that would be present within the vicinity of existing scenic views/vistas.



Table 4.1-1
Segments within the Vicinity of a Scenic Route

Segment	Scenic Route
3	Long Beach River Bicycle Path
4	Long Beach River Bicycle Path
5	Long Beach River Bicycle Path, Pacific Electric Railroad, Union Pacific Railroad
6	Long Beach River Bicycle Path
9	Long Beach River Bicycle Path
10	Long Beach River Bicycle Path
11	Long Beach River Bicycle Path, Ocean Boulevard (also identified as an eligible state scenic highway)

The MUST facility would be constructed on the east bank of the LA River, east of the existing bicycle path, near the existing Shoemaker Bridge. The treatment facility would be constructed on vacant, disturbed land. The primary components of the proposed MUST facility would include pretreatment wetlands, the treatment facility, and a storage/polishing pond. Both the pretreatment wetlands and storage pond would serve as a park/water feature amenity, resulting in an improvement in recreational opportunities and aesthetics in the project area. The treatment facility would be enclosed within a multi-level, 30-foot high, 10,000 square-foot building. The proposed building and associated facilities would include contemporary architectural features, and would include both landscape and hardscape improvements. The MUST facility would also include public viewing/gathering areas, seating, and shade structures for visitors to the project site; refer to [Exhibit 2-6](#).

Although visible from the Long Beach River Bicycle Path, the new 30-foot high MUST facility structure would not obstruct existing views to scenic resources, as the treatment facility would be constructed near the Shoemaker Bridge (which would be higher in elevation than the proposed structure). Further, the 11 conveyance segments would not impact any of the scenic views/vistas in the area, as the new facilities would be constructed underground or via open channel within existing public right-of-way or easements. As such, significant impacts to scenic views/vistas during operation of the project would not result.

Short-Term Impacts

Construction activities would temporarily impact scenic views and vistas within the project vicinity. Construction of the proposed MUST facility would involve site grading and construction. Further, construction of the conveyance segments would involve open trenching and excavation within the vicinity of existing scenic views or vistas; refer to [Table 4.1-1](#). However, based on the location of the proposed MUST facility and its proximity to the Shoemaker Bridge, as well as the nature of proposed conveyance construction equipment (subsurface or low-lying/at-grade facilities), these construction activities would not result in the obstruction of scenic resources, as viewed from nearby scenic views/vistas. These short-term impacts would result in less than significant impacts to scenic views/vistas.

Mitigation Measures: No mitigation is required.

b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

Less Than Significant Impact. There are no officially-designated State scenic highways within proximity to the project site.¹ The nearest Eligible State Scenic Highway (not officially designated) is Pacific Coast Highway (Ocean

¹ California Department of Transportation website, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed April 17, 2017.



Boulevard), which traverses Segment 11. As described in Response 4.1(a), the proposed project would not affect scenic resources along this eligible highway. Further, as the project proposes conveyance facilities, view blockage of ocean views would not result. Therefore, project implementation would not damage any scenic resource (i.e., trees, rock outcroppings, or historic buildings) within the viewshed of a state scenic highway or block scenic views to beach areas or open ocean views. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

c) *Substantially degrade the existing visual character or quality of the site and its surroundings?*

Less Than Significant Impact With Mitigation Incorporated.

Long-Term Impacts

A project is generally considered to have a significant visual/aesthetic impact if it substantially changes the character of the project site such that it becomes visually incompatible or visually unexpected when viewed in the context of its surroundings, resulting in degradation of the existing visual character or quality of the site and its surroundings. Implementation of the proposed project would result in construction of the MUST facility and 11 conveyance facilities. Currently, the majority of the MUST site is vacant land/open space with sparse ornamental/non-native vegetation, utility poles, and an advertising/billboard sign. Additionally, City Pump Station No. SD-01 is located within the central portion of the MUST site. The MUST facility would include pretreatment wetlands, the treatment facility, and a storage/polishing pond. The majority of conveyance segments would be constructed underground. However, numerous segments may be constructed as open channel facilities with pocket wetlands/ponds, providing several benefits including recreational/aesthetic enhancements in the site vicinity.

Upon construction of the project, the new buildings associated with the MUST facility would be visible from public right-of-way. However, the treatment facility would be similar in character to the surrounding industrial and recreational uses. All new structures would be constructed north of the Shoemaker Bridge. Thus, the proposed building height (30 feet) would also be consistent with the character of the surrounding developed area. Further, the proposed MUST treatment facility would be subject to City's site plan review process, which would ensure consistency with City standards for site design, architectural treatments, and landscaping. Both the pretreatment wetlands and storage pond would serve as a park/water feature amenity, consistent with the recreational uses located south/southeast of the MUST facility. The conveyance segments constructed underground would not change the visual character/quality of the site. The potential open channel conveyance facilities would be consistent with surrounding uses, and would result in a beneficial aesthetic impact by providing areas of vegetated open space. With adherence to existing City standards for design and site plan review requirements, impacts in this regard would be less than significant.

Short-Term Impacts

Construction activities would be completed over the course of approximately four years (from 2018 through 2021). During this time, project construction activities would temporarily disrupt views within the project area. The project would include demolition and grading/trenching activities. Although these activities would be temporary in nature and would cease upon completion of construction, these activities and associated equipment would be exposed to surrounding motorists, pedestrians, and bicyclists. Mitigation Measure AES-1 would require that construction staging areas be sited as far away from nearby sensitive viewers (e.g., resident, pedestrians/bicyclists, and motorists) as feasible, and that opaque screening material be used to shield public views toward the site throughout the construction process. With implementation of the recommended Mitigation Measure AES-1, the visual character/quality of the site and surroundings would not be substantially degraded during short-term project construction and impacts in this regard would be reduced to less than significant levels.



Mitigation Measures:

AES-1 Construction equipment staging areas shall be located, to the greatest extent feasible, away from nearby existing sensitive viewers (e.g., resident, pedestrians/bicyclists, and motorists), and shall utilize appropriate screening (i.e., temporary fencing with opaque material) to shield public views of construction equipment and material. Prior to issuance of a grading permit, the City of Long Beach City Engineer shall verify that staging locations are identified on final grading/development plans and that appropriate perimeter screening is included as a construction specification.

d) ***Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?***

Less Than Significant Impact With Mitigation Incorporated. There are two primary sources of light: light emanating from building interiors that pass through windows and light from exterior sources (i.e., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting). Depending upon the location of the light source and its proximity to adjacent light sensitive uses, light introduction can be a nuisance, affecting adjacent areas and diminishing the view of the clear night sky.

The proposed project is located within a developed area of the City of Long Beach. Areas surrounding the project site are urbanized and contain various sources of light and glare. Specifically, light and glare in the area is generated from the light emanating from building interiors and light from exterior sources (i.e., building illumination, parking lot lighting, and security lighting) associated with adjacent industrial uses. Within the vicinity of the proposed MUST treatment facility, light and glare caused by car headlights and street lighting associated with the Shoemaker Bridge, Fairbanks Avenue, Shoreline Drive, and 6th Street further influence lighting in the project area.

Pursuant to the *LBMC*, all construction activities may only occur between the hours of 7:00 AM and 7:00 PM, Monday through Friday, and between the hours of 9:00 AM and 6:00 PM on Saturday. Construction activities are prohibited on Sundays. Thus, as required by the *LBMC*, no nighttime construction activities would occur. The conveyance facilities would not require nighttime lighting. During operation of the MUST facility, similar nighttime security lighting would result compared to the surrounding uses. Compliance with Mitigation Measure AES-2 would minimize the project's lighting impacts through the use of lighting design, shielding, direction, and siting techniques to minimize spillover onto adjacent properties. All lighting would be required to utilize directional lighting techniques (without compromising site safety or security) that direct light downwards and minimize light spillover onto adjacent light sensitive receptors. Implementation of Mitigation Measure AES-2 would ensure that long-term (operational) light and glare impacts as a result of the project would be reduced to less than significant levels.

Mitigation Measures:

AES-2 The City of Long Beach shall ensure that any exterior lighting does not spill over onto adjacent uses. Prior to issuance of any building permit, an Outdoor Lighting Plan shall be prepared and submitted to the City of Long Beach Development Services Department, for review and approval, that includes a footcandle map illustrating the amount of light from the proposed project at adjacent light sensitive receptors. All exterior light fixtures shall be shielded or directed away from adjoining uses.



4.2 AGRICULTURE AND FORESTRY RESOURCES

<p><i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</i></p>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d. Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

No Impact. The proposed project would include construction of the MUST facility and associated conveyance facilities along the Los Angeles River, from State Route 91 (SR-91) to the Golden Shore RV Resort. The project site has been previously disturbed by development and does not contain any farmland. According to Figure 9.5, *Agricultural Resource Areas Policy Map of the General Plan*, no farmland exists within the site vicinity. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

No Impact. As shown in Table 4.10-2, *Zoning Designations*, no zoning for agricultural use currently applies to the project site and surrounding areas. Additionally, the project site is not a part of a Williamson Act contract. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.



- c) ***Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?***

No Impact. Refer to Responses 4.2(a) and 4.2(b). No zoning for forest land or timberland exists within the project site, and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

- d) ***Result in the loss of forest land or conversion of forest land to non-forest use?***

No Impact. Refer to Responses 4.2(b) and 4.2(c). No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

- e) ***Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?***

No Impact. As stated above in Responses 4.2(a) through 4.2(c), the project site occurs within an urbanized area and is void of agricultural or forest resources. Thus, there is no potential for the conversion of these resources and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.



4.3 AIR QUALITY

<i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			✓	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		✓		
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		✓		
d. Expose sensitive receptors to substantial pollutant concentrations?		✓		
e. Create objectionable odors affecting a substantial number of people?			✓	

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The proposed project is located within the South Coast Air Basin (Basin), which is governed by the South Coast Air Quality Management District (SCAQMD). Consistency with the SCAQMD *2016 Air Quality Management Plan for the South Coast Air Basin (2016 AQMP)* means that a project is consistent with the goals, objectives, and assumptions set forth in the *2016 AQMP* that are designed to achieve Federal and State air quality standards. According to the SCAQMD CEQA Air Quality Handbook, in order to determine consistency with the *2016 AQMP*, two main criteria must be addressed:

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Since the consistency criteria identified under the first criterion pertains to pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed in Response 4.3(d), below, localized concentrations of carbon monoxide (CO), nitrogen oxides (NO_x), and particulate matter (PM₁₀ and PM_{2.5}) would be less than significant. Therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations. Because reactive organic gasses (ROGs) are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROGs plays in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

b) Would the project cause or contribute to new air quality violations?

As discussed below in Response 4.3(b), the proposed project would result in emissions that would be below the SCAQMD thresholds. Therefore, the proposed project would not have the potential to cause or affect a violation of the ambient air quality standards.



- c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The proposed project would result in less than significant impacts with regard to localized concentrations during project construction. As such, the proposed project would not delay the timely attainment of air quality standards or 2016 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and Southern California Association of Governments (SCAG) air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the 2016 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

- a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

A project is consistent with the AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2016 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the *City of Long Beach General Plan (General Plan)*, SCAG's *Growth Management Chapter of the Regional Comprehensive Plan and Guide (RCPG)*, and SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*. The RTP/SCS also provides socioeconomic forecast projections of regional population growth.

The project proposes the construction of the MUST facility and associated conveyance facilities to divert and treat urban runoff from tributary areas in the project area in an effort to improve water quality within the LA River and Long Beach Harbor. As discussed in [Section 4.13, *Population and Housing*](#), the project would not have the capacity to result in significant population growth as the estimated population growth associated with the project would be at most up to 10 employees; two shifts of three operators Monday through Friday, two shifts of two operators Saturday and Sunday, and the facility would be open to the public on a limited basis. Therefore, the proposed project is considered consistent with the *General Plan*, and is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the RCPG. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City. Additionally, as the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the proposed project would be consistent with the projections.

- b) *Would the project implement all feasible air quality mitigation measures?*

The proposed project would result in less than significant air quality impacts. Compliance with emission reduction measures identified by the SCAQMD would be required as identified below in Response 4.3(b). As such, the proposed project meets this AQMP consistency criterion.

- c) *Would the project be consistent with the land use planning strategies set forth in the AQMP?*

The proposed project would serve to implement various policies set forth by the City and SCAG. The proposed project is located within a developed portion of the City and would provide a solution to meeting



clean water mandates within the City. The proposed MUST facility would be located on vacant land and the conveyance facilities would be located within existing public right-of-way. The project site is in the vicinity of a mix of uses including industrial, residential, recreational, and institutional.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The proposed project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. As discussed above, the proposed project's long-term influence would also be consistent with the goals and policies of the AQMP and is, therefore, considered consistent with the SCAQMD's 2016 AQMP.

Mitigation Measures: No mitigation is required.

b) ***Violate any air quality standard or contribute substantially to an existing or projected air quality violation?***

Less Than Significant Impact With Mitigation Incorporated.

Short-Term (Construction) Emissions

Construction Emissions

Future construction of the project site would generate short-term air quality impacts. Construction equipment would include excavators, concrete/industrial saws, excavators, rubber tired dozers, tractors, loaders, and backhoes. Exhaust emission factors for typical diesel-powered heavy equipment are based on the California Emissions Estimator Model (CalEEMod) program defaults. Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site. The analysis of daily construction emissions has been prepared utilizing CalEEMod. Table 4.3-1, Construction Air Emissions, presents the anticipated daily short-term construction emissions.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading, excavation, and construction is expected to be short-term and would cease upon project completion. Additionally, most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM₁₀ (particulate matter smaller than 10 microns) generated as a part of fugitive dust emissions. PM₁₀ poses a serious health hazard alone or in combination with other pollutants. PM_{2.5} is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. PM_{2.5} is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_x and sulfur oxides (SO_x) combining with ammonia. PM_{2.5} components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.



**Table 4.3-1
Construction Air Emissions**

Construction Emissions Source	Pollutant (pounds/day) ¹					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Year 1						
Unmitigated Emissions	3.82	38.68	23.05	0.04	2.33	1.89
Mitigated Emissions ²	3.82	38.68	23.05	0.04	2.22	1.87
SCAQMD Thresholds	75	100	550	150	150	55
Is Threshold Exceeded?	No	No	No	No	No	No
Year 2						
Unmitigated Emissions	3.60	36.11	22.73	0.04	2.19	1.75
Mitigated Emissions ²	3.60	36.11	22.73	0.04	2.08	1.74
SCAQMD Thresholds	75	100	550	150	150	55
Is Threshold Exceeded?	No	No	No	No	No	No
Year 3						
Unmitigated Emissions	4.55	50.32	32.71	0.06	8.45	5.38
Mitigated Emissions ²	4.55	50.32	32.71	0.06	4.99	3.48
SCAQMD Thresholds	75	100	550	150	150	55
Is Threshold Exceeded?	No	No	No	No	No	No
Year 4						
Unmitigated Emissions	4.28	46.51	31.57	0.06	8.26	5.20
Mitigated Emissions ²	4.28	46.51	31.57	0.06	4.80	3.31
SCAQMD Thresholds	75	100	550	150	150	55
Is Threshold Exceeded?	No	No	No	No	No	No
ROG = reactive organic gases; NO _x = nitrogen oxides; CO = carbon monoxide; SO ₂ = sulfur dioxide; PM ₁₀ = particulate matter up to 10 microns; PM _{2.5} = particulate matter up to 2.5 microns						
Notes: 1. Emissions were calculated using the California Emissions Estimator Model, as recommended by the SCAQMD. 2. As depicted in this table, the recommended mitigation measures would be required to ensure compliance with SCAQMD Rules and Regulations, which would be verified and enforced through the City's development review process. The reduction/credits for construction emission mitigations are based on mitigation included in CalEEMod and as typically required by the SCAQMD. The mitigation includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. 3. Refer to Appendix A, Air Quality/Greenhouse Gas Data , for assumptions used in this analysis.						

Mitigation Measure AQ-1 would implement dust control techniques (i.e., daily watering), limitations on construction hours, and adherence to SCAQMD Rules 402 and 403 (which require watering of inactive and perimeter areas, track out requirements, etc.), to reduce PM₁₀ and PM_{2.5} concentrations. As depicted in [Table 4.3-1](#), total PM₁₀ and PM_{2.5} emissions would not exceed the SCAQMD thresholds during construction. Therefore, impacts would be less than significant.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, employee commutes to the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As presented in [Table 4.3-1](#), construction equipment and worker vehicle exhaust emissions would not exceed the established SCAQMD threshold for all criteria pollutants. Therefore, impacts in this regard would be less than significant.



ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O₃ precursors. In accordance with the methodology prescribed by the SCAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. Based on [Table 4.3-1](#), the proposed project would not result in an exceedance of ROG emissions and impacts would be considered less than significant.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the California Air Resources Board in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (August 2000), serpentinite and ultramafic rocks are not known to occur within the project area. Thus, there would be no impact in this regard.

Total Daily Construction Emissions

In accordance with the SCAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. CalEEMod allows the user to input mitigation measures such as watering the construction area to limit fugitive dust. Mitigation measures that were input into CalEEMod allow for certain reduction credits and result in a decrease of pollutant emissions. Reduction credits are based upon studies developed by CARB, SCAQMD, and other air quality management districts throughout California, and were programmed within CalEEMod. As indicated in [Table 4.3-1](#), CalEEMod calculates the reduction associated with recommended mitigation measures.

As indicated in [Table 4.3-1](#), impacts would be less than significant for all criteria pollutants during construction. In accordance with SCAQMD Rules 402 and 403, the project would be required to implement Mitigation Measure AQ-1 to reduce PM₁₀ and PM_{2.5} emissions resulting from fugitive dust. Thus, construction related air emissions would be less than significant with mitigation incorporated.

Long-Term (Operational) Emissions

Long-term air quality impacts would consist of mobile source emissions generated from project-related trips. The project proposes a MUST facility, which would divert and treat urban runoff from tributary areas in the project area in an effort to improve water quality within the LA River and Long Beach Harbor. The project would only require two shifts of three operators Monday through Friday, two shifts of two operators Saturday and Sunday, and limited public educational tours. Additionally, the proposed MUST facility equipment would be electrical and would not generate any stationary source emissions. However, the proposed project would include the use of two 500 kilowatt (kW) emergency diesel generators, allowing the pump station to run on backup power for operational redundancy. As the backup generator would be installed on-site, the City would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air



quality standards in the Basin. Backup generators would be used only in emergency situations and for routine testing and maintenance purposes, and would not contribute substantial emissions capable of exceeding SCAQMD thresholds. Therefore, impacts in this regard would be less than significant.

Mitigation Measures:

AQ-1 Prior to issuance of any Grading Permit, the City of Long Beach City Engineer shall confirm that the Grading Plan and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered every three hours during daily construction activities and when dust is observed migrating from the project site to prevent excessive amounts of dust;
- Pave or apply water every three hours during daily construction activities or apply non-toxic soil stabilizers on all parking areas and staging areas. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;
- Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered three times daily, or non-toxic soil binders shall be applied;
- All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
- Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
- Track-out devices such as gravel bed track-out aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes;
- On-site vehicle speed shall be limited to 15 miles per hour;
- Visible dust beyond the property line which emanates from the project shall be prevented to the maximum extent feasible;
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site; and
- Trucks associated with soil-hauling activities shall avoid residential streets and utilize City-designated truck routes to the extent feasible.

c) ***Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?***

Less Than Significant Impact With Mitigation Incorporated.



Cumulative Construction Impacts

With respect to the proposed project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to Federal Clean Air Act (FCAA) mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures (Mitigation Measure AQ-1). Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. In addition, the proposed project would comply with the adopted 2016 AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted 2016 AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

Cumulative Long-Term Impacts

As discussed previously, the proposed project would not result in long-term air quality impacts, as emissions would not exceed the SCAQMD adopted operational thresholds. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. As a result, the proposed project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with implementation of the proposed project would be less than significant.

Mitigation Measures: Refer to Mitigation Measure AQ-1.

d) ***Expose sensitive receptors to substantial pollutant concentrations?***

Less Than Significant Impact With Mitigation Incorporated. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The California Air Resources Board (CARB) has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Sensitive uses surrounding the project site include residential and institutional uses. Residential uses adjoin conveyance segments 1-7, 9, and 10 and are located approximately 280 feet east of the proposed MUST facility. Jordan High School, located at 6500 Atlantic Avenue, adjoins conveyance segment 2. Los Cerritos Elementary School, located at 515 West San Antonio Drive, adjoins conveyance segment 5. Lafayette Elementary School, located at 2445 Chestnut Avenue, is approximately 330 feet east of conveyance segment 6. Edison Elementary School, located at 625 Maine Avenue, is located approximately 245 feet east of the proposed MUST facility. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds (LSTs) for construction and operations impacts (area sources only). The CO hotspot analysis following the LST analysis addresses localized mobile source impacts.

Localized Significance Thresholds (LST)

LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST lookup tables for one, two, and five acre projects emitting CO, NO_x, PM_{2.5}, or PM₁₀. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD notes that any project over five acres may need to perform air quality



dispersion modeling to assess impacts to nearby sensitive receptors. The project is located within Sensitive Receptor Area (SRA) 4, South Los Angeles County Coastal.

Construction

Based on the SCAQMD guidance on applying LSTs, project construction would occur on the approximately 11.5 acre site. Based on the CalEEMod equipment modeled and SCAQMD methodology, approximately 4 acres per day would be disturbed. As the SCAQMD LST guidance only has thresholds for 1, 2, and 5 acres, the 2 acre threshold was conservatively used. The nearest sensitive receptor (residential uses) would not be directly affected or disturbed as part of the project, but construction would occur in proximity to the school on other portions of the project site. Given the proximity to the existing residences, the lowest available LST values for 25 meters were used per the LST guidance. Table 4.3-2, Localized Significance of Construction Emissions, shows the localized unmitigated construction-related emissions. It is noted that the localized emissions presented in Table 4.3-2 are less than those in Table 4.3-1 because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from hauling activities). As seen in Table 4.3-2, mitigated on-site emissions would not exceed the LSTs for SRA 4.

**Table 4.3-2
Localized Significance of Construction Emissions**

Source	Pollutant (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Construction				
Year 1				
Total Unmitigated On-Site Emissions ¹	38.32	22.30	2.14	1.83
Total Mitigated On-Site Emissions ¹	38.32	22.30	2.02	1.82
Localized Significance Threshold ⁵	66	827	7	5
Thresholds Exceeded?	No	No	No	No
Year 2				
Total Unmitigated On-Site Emissions ²	35.78	22.06	1.99	1.70
Total Mitigated On-Site Emissions ²	35.78	22.06	1.88	1.68
Localized Significance Threshold ⁵	66	827	7	5
Thresholds Exceeded?	No	No	No	No
Year 3				
Total Unmitigated On-Site Emissions ³	50.20	31.96	8.22	5.31
Total Mitigated On-Site Emissions ³	50.20	31.96	4.76	3.42
Localized Significance Threshold ⁵	66	827	7	5
Thresholds Exceeded?	No	No	No	No
Year 4				
Total Unmitigated On-Site Emissions ⁴	46.40	30.88	8.03	5.14
Total Mitigated On-Site Emissions ⁴	46.40	30.88	4.57	3.24
Localized Significance Threshold ⁵	66	827	7	5
Thresholds Exceeded?	No	No	No	No

Notes:

1. For construction Year 1, the demolition phase emissions are presented as the worst case scenario.
2. For construction Year 2, the demolition phase emissions are presented as the worst case scenarios.
3. For construction Year 3, the grading phase emissions are presented as the worst case scenarios.
4. For construction Year 4, the grading phase emissions are presented as the worst case scenarios.
5. The Localized Significance Threshold was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_x, CO, PM₁₀, and PM_{2.5}. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (approximately 4 acres; therefore the 2-acre threshold was conservatively used), the distance to sensitive receptors, and the source receptor area (SRA 4).



Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.). The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization [ICU]) by 0.02 (two percent) for any intersection with an existing level of service LOS D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections.

As noted previously, the project involves the construction of the MUST facility and associated conveyance facilities. Operational vehicle trips would be nominal since the project would require two shifts of three operators Monday through Friday, two shifts of two operators Saturday and Sunday, and the facility would be open to the public on a limited basis. As traffic generation associated with the proposed MUST facilities would be nominal, it would not be of sufficient volume to increase the ICU of nearby intersections to warrant a CO hotspot analysis.

Mitigation Measures: Refer to Mitigation Measure AQ-1.

e) ***Create objectionable odors affecting a substantial number of people?***

Less Than Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors capable of affecting a substantial number of people.

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon project completion. Any impacts to existing adjacent land uses would be short-term and are less than significant.

Mitigation Measures: No mitigation is required.



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4.4 BIOLOGICAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		✓		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		✓		
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		✓		
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		✓		
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			✓	
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

This section is based on the *Long Beach Municipal Urban Stormwater Treatment (MUST) Facility Project Biological Resources Report* (Biological Report) prepared by Michael Baker International, Inc., dated April 2017 (refer to Appendix B, *Biological Report*).

- a) ***Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?***

Less Than Significant Impact With Mitigation Incorporated. The proposed project would include construction of the MUST facility and associated conveyance facilities along the Los Angeles River, a channelized flood control waterway, from State Route 91 (SR-91) to the Golden Shore RV Resort. The project site has been previously disturbed and is located within an urbanized area. According to the Biological Report, the project site includes developed and disturbed habitat, as well as disturbed and restored coastal sage scrub. The disturbed and restored coastal sage scrub is limited to portions of Segment 5 of the conveyance facilities, refer to Exhibit 2-3.

Based on the literature/records search performed as part of the Biological Report, 15 special-status plant species and 20 special-status wildlife species are known to occur within a five-mile radius of the project site. Each of these species were documented by the literature/records search as having a low potential or are not expected to occur



within the survey area. Based on the field review performed as part of the Biological Report, no special-status plant or wildlife species were observed within the study area.

No endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species are known to occur within the boundaries of the project site. Project implementation would not result in a substantial adverse effect, either directly or through habitat modifications, on any sensitive species. The restored coastal sage scrub located within the survey area for Segment 5 is not expected to be affected by the proposed project. While a minor amount of disturbed habitat and ornamental landscaping may be affected, impacts to sensitive biological resources are not anticipated given the disturbed nature of the project site.

Since the proposed project may result in the removal of disturbed habitat and ornamental vegetation in various locations of the project site, the proposed project could result in potential impacts to nesting birds protected by the Migratory Bird Treaty Act (MBTA). The MBTA prohibits activities that result in the direct take (defined as killing or possession) of a migratory bird. The proposed project has the potential to impact nesting birds if construction activities occur during the nesting season. However, Mitigation Measure BIO-1 has been provided to reduce impacts in this regard to less than significant levels.

Mitigation Measures:

BIO-1 If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from January 1 - August 31), a pre-construction clearance survey for nesting birds shall be conducted twice per week during the three weeks prior to the scheduled vegetation clearance.

The biologist conducting the clearance survey shall document the negative results if no active bird nests are observed on the project site or within the vicinity during the clearance survey with a brief letter report indicating that no impacts to active bird nests would occur before construction can proceed. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Results of the pre-construction survey and any subsequent monitoring shall be provided to the California Department of Fish and Wildlife (CDFW) and other appropriate agencies.

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Less Than Significant Impact With Mitigation Incorporated. No known riparian habitats are present on-site. Restored coastal sage scrub occurs along conveyance segment 5, and disturbed coastal sage scrub occurs in adjacent disturbed areas along segment 5. Based on the biological report, neither the restored nor disturbed coastal sage scrub would be affected by the project. However, there is a potential for impacts to migratory birds within existing vegetation that may be affected by the project and in the immediate area during project construction; refer to Response 4.4(a). Mitigation Measure BIO-1 has been included to ensure that any potential impacts to species in riparian habitat are less than significant.

Mitigation Measures: Refer to Mitigation Measure BIO-1.

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*



Less Than Significant Impact With Mitigation Incorporated. There are no federally protected wetlands present on the project site, since the project site includes developed and disturbed habitat. However, there is a jurisdictional feature within the survey area consisting of a concrete-lined flood channel located within the northeastern portion of conveyance segment 5, in addition to the termini of numerous conveyance segments connecting to existing flood control facilities within the project area. These features are likely subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Federal Clean Water Act, the CDFW pursuant to Section 1600 of the California Fish and Game Code, and Regional Water Quality Control Board (RWQCB) pursuant to CWA Section 401. As such, Mitigation Measure BIO-2 would be implemented to require preparation of a Jurisdictional Delineation during the final design phase to quantify impacts and also require the acquisition of regulatory permits from the Corps, CDFW, and RWQCB. Impacts to jurisdictional waters of the U.S. and State would be mitigated according to existing agency requirements, at a minimum 1:1 ratio to ensure adequate minimization of impacts. With implementation of Mitigation Measure BIO-2, impacts in this regard would be less than significant.

Mitigation Measures:

BIO-2 Prior to any construction activities affecting jurisdictional waters of the U.S. or State, the City of Long Beach shall conduct a jurisdictional delineation (JD) for the proposed project to quantify impacts to jurisdictional features, pursuant to Section 404 of the Federal Clean Water Act (CWA), Section 1600 of the California Fish and Game Code, and Section 401 of the CWA. Based on the results of the JD, the City of Long Beach shall consult with the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board to obtain regulatory permits, as necessary based on project impacts. In consultation with the regulatory agencies, compensatory mitigation for jurisdictional impacts shall be provided at a minimum 1:1 ratio, or as directed in accordance with existing agency requirements.

d) ***Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

Less Than Significant Impact With Mitigation Incorporated. The proposed MUST facility and associated conveyance facilities would be constructed on previously disturbed and developed areas that primarily consist of disturbed habitat and ornamental landscaped features. The project site is surrounded by urban uses; therefore, the site does not function as a wildlife movement corridor. Therefore, impacts to wildlife corridors or linkages are anticipated to be less than significant. However, vegetation within and adjacent to the project site has the potential to provide favorable conditions for avian nesting. Mitigation Measure BIO-1 has been included to ensure that any potential impacts to wildlife species (i.e., nesting migratory birds) are less than significant.

Mitigation Measures: Refer to Mitigation Measure BIO-1.

e) ***Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

Less Than Significant Impact. Vegetation removal associated with the proposed project is anticipated to be limited primarily to removal of ornamental trees and landscaping on-site for the purpose of constructing the MUST and associated conveyance facilities. Chapter 14.28 of the LBMC contains regulations on tree and shrub planting, removal, and maintenance, including the protection of all trees located along the street, alley, court, or other public place during construction activities. Any removal of trees or shrubs within City streets as required for project construction would be performed consistent with the LBMC. Thus, with implementation of Chapter 14.28 of the LBMC impacts to local policies protecting biological resources would be less than significant.

Mitigation Measures: No mitigation is required.



- f) **Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

No Impact. According to the U.S. Fish and Wildlife Service's *HCP/NCCP Planning Areas in Southern California Map*¹ and *California Regional Conservation Plans Map*² the proposed project site is neither located within Natural Community Conservation Plan (NCCP) nor Habitat Conservation Plan (HCP). As such, there would be no impact in this regard.

Mitigation Measures: No mitigation is required.

¹ U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, *HCP/NCCP Planning Areas in Southern California*, October 2008.

² California Department of Fish and Wildlife, *California Regional Conservation Plans Map*, August 2015.



4.5 CULTURAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?		✓		
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?		✓		
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		
d. Disturb any human remains, including those interred outside of dedicated cemeteries?			✓	

This section is based on the following documents (refer to Appendix C, Cultural Report and Paleontological Assessment):

- *Cultural Resources Survey Report for the Long Beach Municipal Urban Stormwater Treatment (MUST) Project, City of Long Beach, Los Angeles County, California* (Cultural Report), prepared by Cogstone, dated April 2017.
- *Paleontological Resources Assessment for the Long Beach Municipal Urban Stormwater Treatment Project, City of Long Beach, Los Angeles County, California* (Paleontological Assessment), prepared by Cogstone, dated April 2017.

a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?

Less Than Significant Impact With Mitigation Incorporated. According to the literature/records search performed as part of the Cultural Report, a total of 16 prior cultural studies have been performed that included portions of the project area. All 16 of these prior studies were negative for cultural resources within the project impact area. A total of 57 cultural resources have been previously documented outside of project boundaries but within a half-mile of project boundaries. These consist of three prehistoric sites, one multicomponent site, one historic archaeological site and 52 historic built environment resources.

The Cultural Report included an intensive pedestrian survey of the project site. Based on the survey, one built environment historical resource was encountered within the project area consisting of two segments of the Pacific Electric Railway, Long Beach Line, designated as the Pacific Electric Railway Freight Line (PERY Freight Line). The railroad segments recorded are thought to be at least 75 years old, possibly several years older. They are historic in age. Although the PERY Freight Line is eligible for listing under Criterion 1 of the California Register of Historic Resources (CRHR) criteria for significance for its association with World War II, it lacks sufficient integrity and, therefore, is recommended as not eligible for CRHR listing.

Based on Figure 12, *City of Long Beach Designated Landmarks* of the Historic Preservation Element of the *General Plan*, the closest historical resource to the project site is the Bembridge House, built in 1906 and located approximately 180 feet east of Segment 9 at 953 Park Circle. Further, Segment 9 is adjacent to the western boundary of the Drake Park/Wilmore City Historic District, as shown on Figure 13, *City of Long Beach Designated Historic Districts* of the Historic Preservation Element of the *General Plan*. The project would not result in any



impacts to either the Bembridge House or Drake Park/Wilmore City Historic District, since these resources are outside of project boundaries.

Although impacts related to historic resources were determined to be less than significant, due to poor ground visibility in portions of the project area during the pedestrian survey, it is possible that historic resources may be discovered during vegetation clearing and ground disturbing activities during project construction. As such, Mitigation Measure CUL-1 has been incorporated, which would require that construction activities cease in the area of a find, and that a qualified archaeologist is retained to analyze the resource and develop an avoidance/mitigation plan. As such, impacts in this regard would be less than significant.

Mitigation Measures:

CUL-1 If evidence of cultural resources is found during excavation, vegetation clearance, and other ground disturbing activities, activity in that area shall cease and the construction contractor shall contact the City of Long Beach Development Services Department. With direction from the Development Services Department, an archaeologist certified by the County of Los Angeles shall be retained to evaluate the discovery prior to resuming grading in the immediate vicinity of the find. If warranted, the archaeologist shall develop a plan of mitigation which may include, but shall not be limited, to, salvage excavation, laboratory analysis and processing, research, curation of the find in a local museum or repository, and preparation of a report summarizing the find.

b) ***Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?***

Less Than Significant Impact With Mitigation Incorporated. As noted in Response 4.5(a), above, one historic archaeological site has been documented within a half-mile search radius. However, no known archaeological resources exist within the boundaries of the site. Although it is not expected that archaeological resources would be encountered during construction due to previous disturbance at the site, the project would require excavation during construction activities. As such, Mitigation Measure CUL-1 is provided in the unlikely event such resources are discovered during the grading, vegetation clearing, and excavation process. Upon implementation of the recommended mitigation measure, impacts would be reduced to a less than significant level. Impacts related to tribal cultural resources are discussed in Section 4.17, Tribal Cultural Resources.

Mitigation Measures: Refer to Mitigation Measure CUL-1.

c) ***Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Less Than Significant Impact With Mitigation Incorporated. According to the Paleontological Assessment, the project is mapped as modern artificial fill, Holocene and late Pleistocene alluvium and alluvial fans, and late to middle Pleistocene non-marine and nearshore marine deposits. At the eastern edges of the project is an outcrop of the old marine to non-marine deposits. In the area of the Palos Verdes Hills, both the late to middle Pleistocene Palos Verdes Sand and the early Pleistocene San Pedro Formation are present adjacent to and beneath the old marine to non-marine deposits. Although no previous fossil localities have been recorded within the project boundaries, three of the 11 project segments would affect sedimentary rocks known to produce fossils including Pleistocene alluvium, Palos Verdes Sand and San Pedro Formation. Based on the Paleontological Assessment, the linear project alignment is paleontologically sensitive for all excavations more than five feet in depth and planned excavations range from 15 to 30 feet below the current surface. As such, Mitigation Measure CUL-2 would require a Paleontological Resources Management Plan providing paleontological resources awareness training, framework for evaluating fossils recovered for significance under CEQA, and curation agreement with an accredited museum. Upon implementation of the recommended mitigation measure, impacts would be less than significant.



Mitigation Measures:

CUL-2 Prior to construction, a Paleontological Resources Management Plan shall be prepared for the proposed project. The Paleontological Resources Management Plan shall include paleontological resources awareness training for earthmoving personnel, provide a rationale for spot-checking to determine when sediments suitable for fossil preservation have been reached in each location and implement monitoring at that point. The plan shall also provide a framework for evaluating fossils recovered for significance under CEQA. Fossils meeting significance criteria shall be prepared, identified by a paleontologist certified by the County of Los Angeles and submitted for curation at an accredited museum such as the Natural History Museum of Los Angeles County. The City of Long Beach Development Services Department shall ensure that the requirement for preparation of the Paleontological Resources Management Plan is identified on project plans and specifications.

d) *Disturb any human remains, including those interred outside of dedicated cemeteries?*

Less Than Significant Impact. No conditions exist that suggest human remains are likely to be found on the project site. Due to the level of past disturbance on-site, it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be encountered during earth removal or disturbance activities. If human remains are found, those remains would require proper treatment, in accordance with applicable laws. State of California Public Resources Health and Safety Code Section 7050.5-7055 describe the general provisions for human remains. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site. As required by State law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendant." If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overlay adjacent remains until the County coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with existing State regulations, which detail the appropriate actions necessary in the event human remains are encountered, impacts in this regard would be considered less than significant.

Mitigation Measures: No mitigation is required.



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4.6 GEOLOGY AND SOILS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			✓	
2) Strong seismic ground shaking?			✓	
3) Seismic-related ground failure, including liquefaction?			✓	
4) Landslides?			✓	
b. Result in substantial soil erosion or the loss of topsoil?			✓	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			✓	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓

- a) ***Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:***
- 1) ***Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.***

Less Than Significant Impact. Southern California, including the project area, is subject to the effects of seismic activity due to the active faults that traverse the area. Active faults are defined as those that have experienced surface displacement within Holocene time (approximately the last 11,000 years) and/or are in a State-designated Alquist-Priolo Earthquake Fault Zone. The Alquist-Priolo Earthquake Fault Zoning Act, enacted in 1973 and amended several times since, address the hazard of surface faulting to structures for human occupancy. Local agencies must enforce the Alquist-Priolo Earthquake Fault Zoning Act in the development permit process by requiring a geologic investigation prepared by a licensed geologist to demonstrate that buildings will not be constructed across active faults.

Based on the 2010 *Fault Activity Map of California*¹ and Figure 2, *Fault Map with Special Study Zones*, of the *Seismic Safety Element* of the *General Plan*, the northwestern portion of the Newport-Inglewood fault zone (Alquist-Priolo Special Study Zone) traverses Segment 5 of the conveyance facilities. However, the Alquist-Priolo Earthquake Fault

¹ State of California Department of Conservation, 2010 *Fault Activity Map of California*, <http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html>, accessed on May 11, 2017.



Zoning Act is intended to prohibit the construction of developments and other structures for human occupancy across active faults. Segment 5 is a proposed conveyance facility that would be designed to carry urban runoff to the MUST facility, and there would be no structures for human occupancy within this segment. In addition, this conveyance facility would convey minor amounts of dry weather urban runoff, and would not involve acutely hazardous materials (such as a petroleum or natural gas pipeline). The project would be required to comply with California Building Code (CBC) standards in order to minimize the potential for damage and major injury during a seismic event. Moreover, design and construction of the proposed project shall comply with existing City standards, including Chapter 18.68 (Earthquake Hazard Regulations) of Title 18 (Buildings and Construction), of the *LBMC*. Through compliance with CBC standards and *LBMC* regulations, impacts associated with fault rupture would be less than significant.

Mitigation Measures: No mitigation is required.

2) ***Strong seismic ground shaking?***

Less Than Significant Impact. Southern California has numerous active seismic faults subjecting residents to potential earthquake and seismic-related hazards. Seismic activity poses two types of potential hazards for residents and structures, categorized either as primary or secondary hazards. Primary hazards include ground rupture, ground shaking, ground displacement, subsidence, and uplift from earth movement. Primary hazards can also induce secondary hazards such as ground failure (lurch cracking, lateral spreading, and slope failure), liquefaction, water waves (seiches), movement on nearby faults (sympathetic fault movement), dam failure, and fires. Both primary and secondary hazards pose a threat to the community as a result of the project's proximity to active regional faults.

The region surrounding the Long Beach area is characterized by a relatively high seismic activity. The greatest damage from earthquakes results from ground shaking. Ground shaking is generally most severe near quake epicenters and generally become weaker further out from the epicenter. Based on *2010 Fault Activity Map of California*², and Figure 2, *Fault Map with Special Study Zones*, of the *General Plan*, a number of active faults occur within the region, including the Newport-Inglewood fault which transects Segment 5 of the project. As such, the project site would be subject to strong seismic shaking during a seismic event, as is the case with the vast majority of areas throughout southern California.

Implementation of the proposed project would install a MUST facility and associated conveyance facilities. Due to the location of the project site, which is within seismically-active region, there is potential for seismic ground shaking. However, the project would be required to comply with CBC standards and Chapter 18.68 of the *LBMC* in order to minimize the potential for damage and major injury during a seismic event. The CBC includes design requirements for construction practices, foundation design, structural seismic resistance, and site classifications to minimize hazards during a seismic event. Through compliance with CBC standards and *LBMC* regulations, impacts associated with strong seismic ground shaking would be less than significant.

Mitigation Measures: No mitigation is required.

3) ***Seismic-related ground failure, including liquefaction?***

Less Than Significant Impact. Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Liquefaction is characterized by a loss of shear strength in the affected soil layers, thereby causing the soils to behave as a viscous liquid. Susceptibility to liquefaction is based on geologic and geotechnical data. River channels and floodplains are considered most susceptible to liquefaction, while alluvial fans have a lower susceptibility. Depth to groundwater is another important element in the susceptibility to liquefaction. Groundwater shallower than 30 feet results in high to very high susceptibility to liquefaction, while deeper water results in low and very low susceptibility.

² State of California Department of Conservation, *2010 Fault Activity Map of California*, <http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html>, accessed on May 11, 2017.



Based on the *Earthquake Zones of Required Investigation Long Beach Quadrangle* prepared by the State of California Department of Conservation, the project site is subject to the potential for liquefaction.³ According to Figure 7, *Liquefaction Potential Area*, of the *Seismic Safety Element* of the *General Plan*, the northern portion of the project site is located within "liquefaction potential minimal" area, the central portion of the project site ranges is located within "liquefaction potential moderate" area, and the southern portion of the project site is located within "liquefaction potential significant" area. Based on the *General Plan*, the consequences for liquefaction in areas designates as having a significant potential for liquefaction includes possible horizontal failure by lateral spreading and instability of containment dikes where they are present, the occurrence of sand boils and differential settlements of the order of several inches to a foot or more. In areas where liquefaction is rated as moderate, the consequences would likely be more subtly characterized by settlement of a few inches and possible sand boils. Notwithstanding, the State Division of Mines and Geology has designated all areas within the City within a liquefaction hazard zone, which requires geotechnical reports for construction projects to mitigate the potential undermining of structural integrity during earthquakes. As stated above, compliance with the CBC and *LBMC* would minimize risks related to liquefaction to a less than significant level.

Mitigation Measures: No mitigation is required.

4) **Landslides?**

Less Than Significant Impact. Landslides are a geologic hazard, with some moving slowly and causing damage gradually, and others moving rapidly and causing unexpected damage. Gravity is the force driving landslide movement. Factors that commonly allow the force of gravity to overcome the resistance of earth material to landslide movement include saturation by water, steepening of slopes by erosion or construction, alternate freezing or thawing, and seismic shaking.

Based on the State of California Department of Conservation, *Earthquake Zones of Required Investigation Long Beach Quadrangle*, the project site is not subject to potential for ground displacement and landslide. Additionally, according to the *General Plan*, slope stability in Long Beach is not a major problem as slopes generally are neither high nor steep. While slope instability is not a major consideration in overall land planning, it is a factor in designing individual sites.

In addition, there are no landforms in the project vicinity capable of producing a significant landslide event. Consequently, there is a low potential for landslides to occur on or near the proposed project site as a result of the proposed project. Therefore, there would be a less than significant impact associated with the exposure of people or structures to potential substantial adverse effects involving landslides.

Mitigation Measures: No mitigation is required.

b) **Result in substantial soil erosion or the loss of topsoil?**

Less Than Significant Impact. The primary concern in regards to soil erosion or loss of topsoil would be during the construction phase of the project. Grading and earthwork activities associated with project construction activities would expose soils to potential short-term erosion by wind and water. All demolition and construction activities would be subject to compliance with the CBC. Further, the project would be subject to compliance with the requirements set forth in the National Pollutant Discharge Elimination System (NPDES) Storm Water General Construction Permit for construction activities; refer to Response 4.9(a). The NPDES Storm Water General Construction Permit requires preparation of a Storm Water Pollution Prevention Plan (SWPPP), which would identify specific erosion and sediment control Best Management Practices (BMPs) that would be implemented to protect storm water runoff during

³ State of California Department of Conservation, *Earthquake Zones of Required Investigation Long Beach Quadrangle*, http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/LONG_BEACH_EZRIM.pdf, accessed on May 3, 2017.



construction activities. Following compliance with the CBC and NPDES requirements, project implementation would result in a less than significant impact regarding soil erosion.

Mitigation Measures: No mitigation is required.

- c) ***Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?***

Less Than Significant Impact. The project site is located within a seismically-active area. As stated within Response 4.6(a)(3), impacts related to liquefaction would be less than significant and, as demonstrated in Response 4.6(a)(4), the project site would not be subject to earthquake-induced landslides.

As stated in Response 4.6(a)(4), according to the *Public Safety Element* of the *General Plan*, slope stability in the City of Long Beach is not a major problem as slopes generally are neither high nor steep. Project improvements would conform to the requirements of the CBC and *LBMC* in order to minimize the potential for hazards due to unstable soils, which would reduce impacts in this regard to less than significant levels.

Mitigation Measures: No mitigation is required.

- d) ***Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?***

Less Than Significant Impact. Expansive soils are defined as soils possessing clay particles that react to moisture changes by shrinking (when dry) or swelling (when wet). According to Figure 3, *Soil Profiles*, of the *Seismic Safety Element* of the *General Plan*, the project site is underlain by fill and alluvial deposits. The fill material is predominantly man-made fill, which is generally composed of fine sand and silt. The Los Angeles Channel filling sediments are composed of a basal sand and gravel aquifer (Gaspur Aquifer) overlain by less permeable flood plain and tidal marsh deposits of fine-grained soils. These near surface soils (upper 50 feet) are characterized as consisting of alternating layers of cohesionless and cohesive soils. The cohesionless soils consist generally of silty sand and sandy silt and are typically loose to medium dense. The cohesive soil layers are generally clayey silts and silty clays of soft to stiff consistency. Clayey soil could be subject to settlement and/or instability. However, the proposed project would comply with the CBC and *LBMC* to minimize the potential for hazards related to expansive soil, reducing impacts to less than significant levels.

Mitigation Measures: No mitigation is required.

- e) ***Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

No Impact. No septic tanks or alternative wastewater disposal systems would be constructed as part of the project, and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.



4.7 GREENHOUSE GASES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Global Climate Change

California is a substantial contributor of global greenhouse gases (GHGs), emitting over 370 million tons of carbon dioxide (CO₂) in 2014.¹ Climate studies indicate that California is likely to see an increase of three to four degrees Fahrenheit (°F) over the next century. Methane (CH₄) is also an important GHG that potentially contributes to global climate change. GHGs are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission.

The impact of anthropogenic activities on global climate change is apparent in the observational record. Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO₂, CH₄, and nitrous oxide (N₂O) from before the start of industrialization (approximately 1750), to over 650,000 years ago. For that period, it was found that CO₂ concentrations ranged from 180 parts per million (ppm) to 300 ppm. For the period from approximately 1750 to the present, global CO₂ concentrations increased from a pre-industrialization period concentration of 280 to 379 parts per million (ppm) in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range.

Regulations and Significance Criteria

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400 to 450 ppm, carbon dioxide equivalent (CO₂eq)² concentration, is required to keep global mean warming below 2 degrees Celsius (°C), which in turn is assumed to be necessary to avoid significant levels of climate change.

Executive Order S-3-05 was issued in June 2005, which established the following GHG emission reduction targets:

- 2010: Reduce GHG emissions to 2000 levels;
- 2020: Reduce GHG emissions to 1990 levels; and
- 2050: Reduce GHG emissions to 80 percent below 1990 levels.

Issued in April 2015, Executive Order B-30-15 requires statewide GHG emissions to be reduced 40 percent below 1990 levels by 2030. Assembly Bill 32 (AB 32) requires that the California Air Resources Board (CARB) determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB has approved a 2020 emissions limit of 431 million metric tons (MT) of CO₂eq (MTCO₂eq). Effective September 8, 2016, Senate Bill 32 (SB 32) requires the State to reduce GHG emissions to 40 percent below 1990 levels by 2030 and Assembly Bill 197 (AB 197) creates a legislative committee to oversee regulators.

¹ California Environmental Protection Agency, *California Greenhouse Gas Emission Inventory - 2016 Edition*, <http://www.arb.ca.gov/cc/inventory/data/data.htm>, accessed May 23, 2017.

² Carbon Dioxide Equivalent (CO₂eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.



Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. In actuality, GHG emissions from the proposed project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change.

In June 2008, the California Governor's Office of Planning and Research (OPR) published a Technical Advisory, which provides informal guidance for public agencies as they address the issue of climate change in California Environmental Quality Act (CEQA) documents.³ This is assessed by determining whether a proposed project is consistent with or obstructs the 39 Recommended Actions identified by CARB in its *Climate Change Scoping Plan* which includes nine Early Action Measures (qualitative approach). The Attorney General's Mitigation Measures identify areas where GHG emissions reductions can be achieved in order to achieve the goals of AB 32. As set forth in the OPR Technical Advisory and in the proposed amendments to the *CEQA Guidelines* Section 15064.4, this analysis examines whether the project's GHG emissions are significant based on a qualitative and performance based standard (*CEQA Guidelines* Section 15064.4(a)(1) and (2)).

SCAQMD Thresholds

On December 5, 2008, the South Coast Air Quality Management District (SCAQMD) adopted GHG significance thresholds for Stationary Sources, Rules, and Plans where the SCAQMD is lead agency. The threshold uses a tiered approach. A proposed project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from Senate Bill (SB) 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For industrial stationary source projects, the SCAQMD adopted a screening threshold of 10,000 MTCO₂eq per year (MTCO₂eq/yr). This threshold was selected to capture 90 percent of the GHG emissions from these types of projects where the combustion of natural gas is the primary source of GHG emissions. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 MTCO₂eq/yr. SCAQMD concluded that projects with emissions less than the screening thresholds would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual (BAU) emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third Option. Under the Tier 4 third option, the project would be excluded if it was below an efficiency-based threshold of 4.8 MTCO₂eq per service population (SP) per year or 3.0 MTCO₂eq per SP for post-2020 projects.⁴ Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

While not adopted by the SCAQMD Board, the guidance document prepared for the stationary source threshold also suggested the same tiered approach for residential and commercial projects with a 3,000 MTCO₂eq/yr screening threshold. However, at the time of adoption of the industrial stationary source threshold, the SCAQMD felt additional analysis was required along with coordination with CARB's GHG significance threshold development efforts.

³ Governor's Office of Planning and Research, *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, 2008.

⁴ The project-level efficiency-based threshold of 4.8 MTCO₂eq per SP per year is relative to the 2020 target date. The SCAQMD has also proposed efficiency-based thresholds relative to the 2035 target date to be consistent with the GHG reduction target date of SB 375. GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. Applying this 40 percent reduction to the 2020 targets results in an efficiency threshold for plans of 4.1 MTCO₂eq per SP per year and an efficiency threshold at the project level of 3.0 MTCO₂eq/year.



At the November 2009 meeting of the SCAQMD GHG working group, SCAQMD staff presented two options for screening thresholds for residential and commercial projects. The first option would have different thresholds for specific land uses. The proposed threshold for residential projects is 3,500 MTCO₂eq/yr, the commercial threshold is 1,400 MTCO₂eq/yr, and the mixed-use threshold is 3,000 MTCO₂eq/yr. The second option would apply the 3,000 MTCO₂eq/yr screening threshold for all commercial/residential projects. Lead agencies would be able to select either option. These thresholds are based on capturing 90 percent of the emissions from projects and requiring them to comply with the higher tiers of the threshold (i.e., performance requirements or GHG reductions outside of the project) to not result in a significant impact.

SCAQMD staff also presented updates for compliance options for Tier 4 of the significance thresholds. The first option would be a reduction of 23.9 percent in GHG emissions over the base case. This percentage reduction represents the land use sector portion of the CARB's *Climate Change Scoping Plan's* overall reduction of 28 percent. This target would be updated as the AB 32 *Climate Change Scoping Plan* is revised. The base case scenario for this reduction still needs to be defined. Residual emissions would need to be less than 25,000 MTCO₂eq/yr to comply with the option. Staff proposed efficiency targets for the third option of 4.6 MTCO₂eq/yr per service population (population plus employment) for project level analysis and 6.6 MTCO₂eq/yr for plan level analyses. For project level analyses, residual emissions would need to be less than 25,000 MTCO₂eq/yr to comply with this option.

At the most recent meeting of the SCAQMD GHG working group, SCAQMD staff recommended extending the 10,000 MTCO₂eq/yr industrial project threshold for use by all lead agencies. The two options for land-use thresholds were reiterated with a recommendation that lead agencies use the second, 3,000 MTCO₂eq/yr threshold for all non-industrial development projects. Staff indicated that they would not be recommending a specific approach to address the first option of Tier 4, Percent Emissions Reduction Target. If lead agencies enquire about using this approach, staff will reference the approach recommended by the San Joaquin Valley Air Pollution Control District and describe the challenges to using this approach. For the third option of Tier 4, SCAQMD staff re-calculated the recommended Tier 4 efficiency targets for project level analyses to 4.8 MTCO₂eq/yr in 2020 and 3.0 MTCO₂eq/yr in 2035. The recommended plan level analysis efficiency target remains 6.6 MTCO₂eq/yr for 2020, but was lowered to 4.1 MTCO₂eq/yr for 2035. SCAQMD staff also stated that they are no longer proposing to include a 25,000 MTCO₂eq/yr maximum emissions requirement for compliance with Tier 4. Staff indicated that they hoped to bring the proposed GHG significance thresholds to the board for their December 2010 meeting; however, this did not occur.

For the proposed project, the 10,000 MTCO₂eq per year industrial screening threshold is used as the significance threshold, in addition to the qualitative thresholds of significance set forth below from Section VII of Appendix G to the *CEQA Guidelines*.

- a) ***Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

Less Than Significant Impact.

Project-Related Sources of Greenhouse Gases

Project-related GHG emissions typically include emissions from construction and operational activities. Construction of the project would result in direct emissions of CO₂, N₂O, and CH₄ from the operation of construction equipment. Transportation of materials and construction workers to and from the project site would also result in GHG emissions. Construction activities would be short-term in duration and would cease upon project completion. The proposed project involves construction of the MUST facility and associated conveyance facilities and does not propose facilities that would generate emissions. Further, the proposed project would only require two shifts of three operators Monday through Friday and two shifts of two operators Saturday and Sunday. The facility would be open to scheduled tours and educational events. However, the tours and events would infrequent, periodic, and would involve small groups of attendees. Thus, vehicle related emissions due to project operations would be minimal. Direct project-related GHG emissions include emissions from construction activities, while indirect sources include emissions from electricity consumption for the additional 14 sump pump stations averaging 10 horsepower each (a



total of 140 horsepower) and 100 kilowatts of treatment facility equipment. As such, operational GHG estimations are based on energy emissions from electricity.

Direct Project-Related Source of Greenhouse Gases

Construction Emissions. Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions.⁵ As shown in Table 4.7-1, Project Related Greenhouse Gas Emissions, the proposed project would result in 1.99 MTCO₂eq/yr (amortized over 30 years), which represents a total of 572.55 MTCO₂eq from construction activities.

**Table 4.7-1
Project Related Greenhouse Gas Emissions**

Source	CO ₂	CH ₄		N ₂ O		Total Metric Tons of CO ₂ eq
	Metric Tons/yr ¹	Metric Tons/yr ¹	Metric Tons of CO ₂ eq ²	Metric Tons/yr ¹	Metric Tons of CO ₂ eq ²	
Construction Emissions						
Total Construction Emissions (amortized over 30 years)	24.71	0.01	0.19	0.00	0.00	24.91
Indirect Emissions						
Energy ³	570.50	0.02	0.59	0.01	1.49	572.58
Total Unmitigated Project-Related Emissions⁴	597.49 MTCO₂eq/yr					
Notes:						
1. Emissions calculated using CalEEMod computer model.						
2. CO ₂ Equivalent values calculated using the US EPA Website, <i>Greenhouse Gas Equivalencies Calculator</i> , https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator , accessed May 2017.						
3. Energy emissions from pumps were calculated separately. Emissions were based on energy consumption from operation of 14 sump pump stations averaging 10 horsepower each (a total of 140 horsepower) and 100 kilowatts of treatment facility equipment and Southern California Edison emissions factors from CalEEMod.						
4. Totals may be slightly off due to rounding.						
Refer to <u>Appendix A, Air Quality/Greenhouse Gas Emissions Data</u> , for detailed model input/output data.						

Indirect Project-Related Source of Greenhouse Gases

Energy Consumption. Energy consumption were calculated using CalEEMod GHG energy emissions factors and project energy consumption. Electricity would be provided to the project site via Southern California Edison (SCE). The proposed project would indirectly result in 574.53 MTCO₂eq/year due to energy consumption; refer to Table 4.7-1.

As shown in Table 4.7-1, the total amount of project-related emissions from direct and indirect sources combined would total 597.49 MTCO₂eq/yr, which is below the 10,000 MTCO₂eq/yr threshold. Therefore, the proposed project would result in a less than significant impact with regard to GHG emissions.

Mitigation Measures: No mitigation is required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The City adopted its Sustainable City Action Plan (CAP) in February 2010 to guide operational, policy, and financial decisions within the City. While the CAP provides a sustainable framework for future developments within the City, the goals outlined in the City’s CAP are primarily municipal in nature, and not

⁵ The project lifetime is based on the standard 30 year assumption of the South Coast Air Quality Management District (SCAQMD). SCAQMD, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, August 26, 2009.



project-specific. Therefore, the implementation of the proposed project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. The proposed project involves construction of the MUST facility and associated conveyance facilities. As discussed above, the proposed project would not generate a significant amount of GHGs in an unmitigated condition and would not exceed the 10,000 MTCO₂eq/yr threshold. Thus, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.



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4.8 HAZARDS AND HAZARDOUS MATERIALS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		✓		
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?		✓		
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		✓		
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✓
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		✓		
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less Than Significant Impact. Exposure of the public or the environment to hazardous materials could occur through the improper handling or use of hazardous materials or hazardous wastes particularly by untrained personnel; transportation accident; environmentally unsound disposal methods; and/or fire, explosion, or other emergencies. The severity of potential effects varies with the activity conducted, the concentration and type of hazardous material or wastes present, and the proximity of sensitive receptors.

Operation of the proposed MUST facility would involve the handling/use and storage of hazardous materials (e.g., chlorine and other chemicals associated with the treatment of urban runoff). The project would be subject to compliance with existing regulations, standards, and guidelines established by the U.S. Environmental Protection Agency (EPA), State, and the City of Long Beach related to the storage, use, and disposal of hazardous materials. The project is subject to compliance with the existing hazardous materials regulations, which are codified in California Code of Regulations Titles 8, 22, and 26, and their enabling legislations set forth in Health and Safety Code Chapter 6.95 as well as California Code of Regulations Title 49. Both the Federal and State governments require any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register



with the City as a manager of regulated substances and prepare a Risk Management Plan. The Risk Management Plan must contain an off-site consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses would be required to submit their plans to the Certified Unified Program Agency (CUPA) (City of Long Beach, Department of Environmental Health [DEH]), which would make the plans available to emergency response personnel. The Risk Management Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location. The City of Long Beach Fire Department (acting as the CUPA as well) would be responsible for enforcing all laws and regulations pertaining to any aboveground or underground storage tanks as well.

While the risk of exposure to hazardous materials cannot be eliminated, best management practices can be implemented to reduce risk to acceptable levels. Adherence to existing regulations would ensure compliance with safety standards related to the use and storage of hazardous materials, and the safety procedures mandated by applicable Federal, State, and local laws and regulations, which would ensure that risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes associated with implementation of the proposed project would be less than significant.

Mitigation Measures: No mitigation is required.

- b) ***Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

Less Than Significant Impact With Mitigation Incorporated.

Short-Term Impacts

Construction Equipment

During project construction, there is a possibility of accidental release of hazardous substances such as petroleum-based fuels or hydraulic fluid used for construction equipment. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials utilized during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and Federal law.

Contaminated Soil

Based on the State Water Resource Control Board's (SWRCB) GeoTracker online database, one on-site property (where conveyance segment 9 traverses, as depicted on Exhibit 2-3, Project Overview), specifically located at 960 De Forest Avenue, has reported a release to soil/groundwater at the project site. From approximately 1930 to 1965, this property was used for electric rail-car repair, maintenance, and inspection. In 1965, Southern Pacific Transportation Company (SPTCo) acquired the property. From 1967 to 1992, SPTCo leased the property to various entities for bulk transfer and storage of liquid petroleum and chemical products. Operators of the property during this period included:

- Gunco Chemical and Manufacturing Company, 1967-1971;
- Charter International Oil Company, 1971-1985; and
- Bulk Terminal Company, 1985-1992.



Three primary chemical storage and distribution areas were located on the property. These included the North Aboveground Storage Tank (AST) Pad, Overhead Piperack Area, and South AST Pad. The North AST Pad included the storage of different chemicals in 10 ASTs. This tank farm was constructed with a concrete and asphalt floor, divided into secondary containment with cinder-block walls. The Overhead Piperack Area was used to transfer chemicals. Ten product delivery pipes were installed and connected the Overhead Pipe Rack to the North AST Pad. Approximately 18 to 26 ASTs were installed in 1980 on a continuous concrete pad surrounded by a secondary-containment wall, referred to as the South AST Area.

Various chemical releases have been reported, including, but not limited to, the following:

- A release of approximately 18,000 gallons of xylenes from underground piping near the Overhead Piperack Area in 1979;
- A spill of unknown quantity of petroleum product known as transmix from tank No. 4 of the North AST Pad on 30 August 1990;
- A spill of approximately 50 to 100 gallons of propylene glycol methyl ether (1-methoxy-2-propanol) on 9 July 1991; and
- Releases of sulfuric acid on and near the South AST Pad, including a spill of unknown quantity in July 1991.

Past investigations documented the presence of chlorinated VOCs and aromatic VOCs (primarily xylenes) in soil and groundwater beneath the site. In addition to these conditions, concentrations of methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), and fecal coliform have been observed in groundwater. MTBE and TBA have not been used at the site or observed at high concentrations in soil gas or soil at the site; thus, these hazardous materials are anticipated to originate from an off-site use. Remedial actions that have occurred at the site to-date include the following:

- Soil excavation and disposal of TPH-impacted materials in 2003, related to the 1990 transmix release;
- SVE from 2003 to 2004; and
- Thermally enhanced SVE utilizing hot air injection from 2004 to 2006.

In 1996, Union Pacific Railroad (UPRR) acquired the property by merger with SPTCo, and it has been vacant since that time. From 1997 to 1998, UPRR's contractor demolished and removed the Warehouse, North and South AST Pads, Overhead Piperack, and associated belowground pipes, railroad tracks, pavement, and general debris. The site currently sits as vacant disturbed land.

Subsequently, total petroleum hydrocarbon (TPH)-impacts soils associated with the transmix release in 1990 were excavated and removed from the site in 2003. ERM, on behalf of UPRR, installed a soil vapor extraction (SVE) system in 2003, which operated until 2004, and was enhanced with thermal injection from 2004 to 2006. ERM estimated that over 60,000 pounds of contaminants were removed from the site by the SVE technology. RWQCB staff approved the decommissioning of the SVE system in May 2007, since it achieved maximum efficiency, in terms of its ability to remove absorbed contaminants. The project underwent further remedial actions by the City of Long Beach in the 2000s, including additional excavation of impacted soil, imported clean backfill material, confirmation soil sampling for volatile organic compounds (VOCs), and groundwater monitoring.

The RWQCB determined that the City of Long Beach fulfilled the site assessment requirements and soil cleanup criteria for an industrial and commercial land use scenario, the current designated zoning, and a no-further-action (NFA) action letter for soil only at the site was issued by the RWQCB on April 23, 2012.

Development of the proposed project would not require any rezoning of the site. However, construction activities could expose construction workers to residual soil and groundwater contamination at the site. The project would be



required to comply with Mitigation Measure HAZ-1 pertaining to notification of proposed work to the RWQCB and preparation of a Soils Management Plan (SMP). A qualified professional engineer or professional geologist would be required to prepare the SMP prior to any site disturbance activities at this property.

Overall, if potentially contaminated soil is identified during site disturbance activities for the project, as evidenced by discoloration, odor, detection by instruments, or other signs, the professional engineer or professional geologist would be required to inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project applicant, representatives of the RWQCB, and City of Long Beach stating the recommended course of action.

Depending on the nature and extent of contamination, the professional engineer or professional geologist would be required to temporarily suspend construction activity at the location, as necessary, for the protection of workers or the public. If, in the opinion of the professional engineer or professional geologist, significant remediation may be required, the City shall contact representatives of the RWQCB for guidance and possible oversight. With compliance with Mitigation Measures HAZ-1 and HAZ-2, impacts pertaining to known and unknown soil contamination during site disturbance would be reduced to less than significant levels.

Contaminated Groundwater

In addition to the former on-site former UPRR Bulk Terminal property, six other off-site properties located in the immediate vicinity of the project site, have reported releases to the groundwater, are undergoing investigation/remediation, and remain open with the RWQCB; refer to Table 4.8-1, Open Groundwater Contamination Sites.

**Table 4.8-1
Open Groundwater Contamination Sites**

Facility Name	Location
On-site Property	
City Owned (Formerly Union Pacific Railroad Company [UPRR] Bulk Terminal)	960 De Forest Avenue
Off-site Properties	
Formerly Robertshaw Controls Company	100 West Victoria Street
Long Beach Industrial Park	3701 Pacific Place
Chevron Service Station #9-4839	601 West Willow Street
Thompson Family Trust	741 West 17 th Street
Ready Self Storage	800 West 15 th Street
Formerly MTA Division 12 Bus Maintenance Facility	970 West Chester Place

Source: California Environmental Protection Agency, *Cortese List Data Resources*, <http://www.calepa.ca.gov/SiteCleanup/CorteseList/>, accessed May 24, 2017.

Based on files reviewed, groundwater may be approximately 8 to 13 below ground surface (bgs), but is anticipated to vary depending the location within the project site. It is likely that dewatering activities would be required for construction of the project, posing a risk of exposure of potentially contaminated groundwater to construction workers. Mitigation Measure HAZ-3 would require a Construction Workers Safety Plan (CWSP) that would provide guidance for handling, segregating, and characterizing potentially contaminated groundwater extracted during dewatering activities in order to minimize impacts to worker safety and the environment. If the water is determined to be contaminated, the CWSP would provide recommendations for proper handling to minimize risk of exposure. Further, all discharge during dewatering would be required to comply with a Dewater Permit with the RWQCB. With implementation of the recommended Mitigation Measure HAZ-3, impacts pertaining to existing potential groundwater contamination on-site would be reduced to less than significant levels.



Roadway Resurfacing

Lead-based paints (LBPs) were commonly used in traffic striping materials before the discontinued use of lead chromate pigment in traffic striping/markings materials and hot-melt Thermoplastic stripe materials (discontinued in 1996 and 2004, respectively). Installation of conveyance facilities within roadway right-of-way could involve the disturbance of existing on-site traffic striping materials, which may involve LBPs. Mitigation Measure HAZ-4 would ensure proper disposal of traffic striping materials. With compliance with the recommended mitigation measure HAZ-4, impacts in this regard would be reduced to less than significant levels.

Long-Term Operational Impacts

As discussed in Response 4.8(a), adherence to existing regulations would ensure compliance with safety standards related to the accidental conditions involving hazardous materials during project operations would reduce impacts in this regard to less than significant levels.

Mitigation Measures:

HAZ-1 The City of Long Beach shall retain a qualified California-Registered Geologist or a California-Registered Civil Engineer to prepare a Soils Management Plan (SMP) prior to the issuance of any grading permit at or near the property located at 960 De Forest Avenue, Long Beach. As part of the SMP, the qualified professional shall notify the Los Angeles Regional Water Quality Control Board (RWQCB) of proposed activities at this property. The SMP shall include, but not be limited to:

- Land use history, including description and locations of known contamination;
- The nature and extent of previous investigations and remediation at the site;
- Identified areas of concern at the site, in relation to proposed activities;
- A listing and description of institutional controls, such as the City's excavation ordinance and other local, state, and federal regulations and laws that would apply to the project;
- Names and positions of individuals involved with soils management and their specific role;
- An earthwork schedule;
- Requirements for site-specific Health and Safety Plans (HSPs) to be prepared by all contractors at the project site. The HSP should be prepared by a Certified Industrial Hygienist and would protect onsite workers by including engineering controls, personal protective equipment, monitoring, and security to prevent unauthorized entry and to reduce construction related hazards. The HSP should address the possibility of encountering subsurface hazards including hazardous waste contamination and include procedures to protect workers and the public;
- Hazardous waste determination and disposal procedures for known and previously unidentified contamination, including those associated with any soil export activities, if applicable;
- Requirements for site specific techniques at the site to minimize dust, manage stockpiles, run-on and run-off controls, waste disposal procedures, etc.; and
- Copies of relevant permits or closures from regulatory agencies.



HAZ-2 If potentially contaminated soil is identified during site disturbance activities for the project, as evidenced by discoloration, odor, detection by instruments, or other signs, a qualified California-Registered Geologist or a California-Registered Civil Engineer retained by the City of Long Beach shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project applicant, representatives of the Los Angeles Regional Water Quality Control Board (RWQCB), and City of Long Beach stating the recommended course of action.

Depending on the nature and extent of contamination, the professional engineer or professional geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If, in the opinion of the professional engineer or professional geologist, substantial remediation may be required, the City of Long Beach shall contact representatives of the Los Angeles Regional Water Quality Control Board (RWQCB) for guidance and possible oversight.

HAZ-3 Prior to issuance of a Dewatering Permit for the proposed project, a Construction Workers Safety Plan (CWSP) shall be developed by a qualified California-Registered Geologist or a California-Registered Civil Engineer, retained by the City of Long Beach. At a minimum, the CWSP shall include guidance for handling, segregating, and characterizing potentially contaminated groundwater extracted during dewatering activities in order to minimize impacts to worker safety and the environment. The CWSP shall also require that the Contractor comply with any requirements made by a Dewatering Permit issued by the Los Angeles Regional Water Quality Control Board (RWQCB), as applicable.

HAZ-4 Prior to site disturbance activities, the City of Long Beach shall retain a lead specialist to conduct sampling activities to verify whether or not on-site traffic striping materials are associated with lead-based paints above regulatory thresholds. The lead specialist shall report the findings to the City of Long Beach City Engineer, and shall include recommendations for the construction contractor regarding proper handling and disposal of materials, if necessary.

c) ***Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

Less Than Significant Impact With Mitigation Incorporated. The following schools currently exist within 0.25-mile of the project site:

- **Edison Elementary:** Located approximately 250 feet east of the MUST site at 625 Maine Avenue;
- **Lafayette Elementary:** Located approximately 340 feet east of Segment 6 at 2445 Chestnut Avenue;
- **Los Cerritos Elementary:** Located adjacent to Segment 5 at 515 West San Antonio Drive;
- **Colin Powell Elementary:** Located 920 feet west of Segment 3 at 150 West Victoria Street; and
- **Jordan High School:** Located adjacent to Segment 2 at 6500 Atlantic Avenue.

The proposed project may involve potential disturbance of soil contamination at 960 De Forest Avenue (as discussed above in Response 4.8(b)). However, this particular property is located greater than 0.25-mile of any existing or proposed school site. Thus, impacts in this regard would be less than significant. Further, any handling of potentially contaminated soils would be required to comply with Federal, State, and local laws and regulations as well as Mitigation Measure HAZ-1. Project construction would also potentially involve the handling of LBPs associated with traffic striping during installation of conveyance facilities within roadway right-of-way. Compliance with Mitigation Measure HAZ-4 would reduce impacts in this regard, also reducing impacts pertaining to proximity to a school site.

Operations of the project would also involve the handling of hazardous materials at the MUST facility, which is located within 250 feet of Edison Elementary School. As discussed in Response 4.8(a), project operations would involve the handling/use and storage of hazardous materials (e.g., chlorine and other chemicals associated with the treatment of water). The project would be subject to compliance with existing regulations, standards, and guidelines



established by the EPA, State, and the City of Long Beach related to the storage, use, and disposal of hazardous materials. The project would be required to register with the City as a manager of regulated substances and prepare a Risk Management Plan. The Risk Management Plan must contain an off-site consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses would be required to submit their plans to the City of Long Beach, DEH, which would make the plans available to emergency response personnel. The City of Long Beach Fire Department (acting as the CUPA as well) would be responsible for enforcing all laws and regulations pertaining to any aboveground or underground storage tanks as well. Adherence to existing regulations would ensure compliance with safety standards related to the use and storage of hazardous materials, and the safety procedures mandated by applicable Federal, State, and local laws and regulations, which would ensure that risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes associated with implementation of the proposed project would be less than significant.

Thus, with compliance with existing Federal, State, and local laws and regulations and implementation of Mitigation Measures HAZ-1 and HAZ-4, the project would not result in any significant impacts involving the handling of hazardous materials, substances, or waste within the vicinity of a school. Impacts in this regard would be reduced to less than significant levels.

Mitigation Measures: Refer to Mitigation Measures HAZ-1 and HAZ-4.

- d) ***Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?***

Less Than Significant Impact With Mitigation Incorporated. Government Code Section 65962.5 requires the Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB) to compile and update a regulatory sites listing (per the criteria of the Section). The California Department of Health Services is also required to compile and update, as appropriate, a list of all public drinking water wells that contain detectable levels of organic contaminants and that are subject to water analysis pursuant to Section 116395 of the Health and Safety Code. Section 65962.5 requires the local enforcement agency, as designated pursuant to Section 18051 of Title 14 of the California Code of Regulations (CCR), to compile, as appropriate, a list of all solid waste disposal facilities from which there is a known migration of hazardous waste.

Conveyance segment 9 traverses City-owned property that has been listed pursuant to Government Code Section 65962.5. As discussed in Response 4.8(b), implementation of the recommended Mitigation Measure HAZ-1 would reduce impacts in this regard to less than significant levels.

Mitigation Measures: Refer to Mitigation Measure HAZ-1.

- e) ***For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?***

No Impact. The proposed project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest airport to the project site is the Long Beach Airport, located approximately 3.3 miles to the northeast of the project site at 4100 Donald Douglas Drive. In addition, the project site is located outside of the Long Beach Airport Influence Area.¹ Therefore, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

¹ Los Angeles County Airport Land Use Commission, *Long Beach Airport, Airport Influence Area Map*, May 13, 2003.



- f) ***For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?***

No Impact. There are no private airstrips located within the vicinity of the proposed project, and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

- g) ***Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

Less Than Significant Impact With Mitigation Incorporated. The proposed project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Project construction activities could result in short-term temporary impacts to street traffic along roadway right-of-way on-site; refer to Exhibit 2-3, Project Overview. While temporary lane closures would be required, travel along surrounding roadways would remain open and would not interfere with emergency access in the site vicinity. In addition, the project would be required to comply with Mitigation Measure HAZ-5, which requires the construction contractor to notify the Long Beach Fire Department (LBFD), Long Beach Police Department (LBPD), and City of Long Beach Public Works Department of construction activities that would impede movement (such as lane closures) along roadway right-of-way on-site. Compliance with Mitigation Measure HAZ-5 would allow for uninterrupted emergency access to evacuation routes. Thus, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures:

HAZ-5 At least three business days prior to any lane closure, the construction contractor shall notify the Long Beach Fire Department (LBFD) and Long Beach Police Department (LBPD), along with the City of Long Beach City Engineer, of construction activities that would impede movement (such as lane closures) along public roadways in the project area, in order to ensure uninterrupted emergency access and maintenance of evacuation routes. This requirement shall be indicated on project plans and specifications, subject to verification by the City of Long Beach City Engineer.

- h) ***Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?***

No Impact. The project site is located within an urbanized area and is not identified as a high fire hazard area in the City.² Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

² California Department of Forestry and Fire Protection, *California Fire Hazard Severity Zone Maps*, http://www.fire.ca.gov/fire_prevention/fhsz_maps_losangeles, accessed May 31, 2007.



4.9 HYDROLOGY AND WATER QUALITY

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			✓	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			✓	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓	
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			✓	
f. Otherwise substantially degrade water quality?			✓	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✓
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			✓	
j. Inundation by seiche, tsunami, or mudflow?			✓	

a) *Violate any water quality standards or waste discharge requirements?*

Less Than Significant Impact. As part of Section 402 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) has established regulations under the National Pollutant Discharge Elimination System (NPDES) program to control direct storm water discharges. In California, the State Water Regional Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The NPDES program regulates industrial pollutant discharges, which include construction activities. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The City of Long Beach is within the jurisdiction of the Los Angeles RWQCB.



Short-Term Construction

Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP would list Best Management Practices (BMPs) the discharger would use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP would contain: a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.

The project's construction activity would be subject to the State's General Construction Permit, as discussed above, because it involves clearing, grading, and disturbances to the ground such as stockpiling or excavation, and a construction site with soil disturbance greater than one acre. More specifically, as part of the project's compliance with NPDES requirements, the City would be required to prepare a Notice of Intent (NOI) for submittal to the Los Angeles RWQCB providing notification of intent to comply with the General Construction Permit. A copy of the SWPPP would be made available and implemented at the construction site at all times. The SWPPP is required to outline the erosion, sediment, and non-storm water BMPs, in order to minimize the discharge of pollutants at the construction site. These BMPs would include measures to contain runoff from vehicle washing at the construction site, prevent sediment from disturbed areas from entering the storm drain system using structural controls (i.e., sand bags at inlets), and cover and contain stockpiled materials to prevent sediment and pollutant transport. Implementation of the BMPs would ensure runoff and discharges during the project's construction phase would not violate any water quality standards. Compliance with NPDES requirements would reduce short-term construction-related impacts to water quality to a less than significant level.

Long-Term Operations

Los Angeles RWQCB Requirements for Long Beach

Since 1990, operators of municipal separate storm sewer systems are required to develop a storm water management program designed to prevent harmful pollutants from impacting water resources via storm water runoff. The City of Long Beach owns and/or operates a large municipal separate storm sewer system (MS4) that conveys and ultimately discharges into surface waters under the jurisdiction of the Los Angeles RWQCB. These discharges originate as surface runoff from the various land uses within the City's boundary. Untreated, these discharges contain pollutants with the potential to impair or contribute to the impairment of the beneficial uses in surface waters. Since 1999, the City's monitoring data and analyses in support of Total Maximum Daily Load (TMDL) development have identified pollutants of concern in discharges from the MS4. These pollutants of concern vary by receiving water. They generally include, but are not limited to, copper, lead, zinc, cadmium, PCBs, PAHs, pyrethroid pesticides, organophosphate pesticides fecal indicator bacteria, and trash. The project area's receiving waterbody is the Los Angeles River which contain the following pollutants of concern: chlordane, DDT, lead, PCBs, sediment toxicity, zinc, and trash.

On September 8, 2016, the Los Angeles RWQCB made effective Order No. R4-2014-0024-A01, which amended the municipal NPDES permit. As prescribed in Order No. R4-2014-0024-A01, *Water Discharge Requirements for*



Municipal Separate Storm Sewer System Discharges From The City of Long Beach, the City of Long Beach shall develop and implement procedures to ensure that a discharger fulfills the following for non-storm water discharges to MS4s:¹

- Notifies the City of Long Beach of the planned discharge in advance, consistent with requirements in Table 7 of Order No. R4-2014-0024-A01 or recommendations pursuant to the applicable BMP manual;
- Obtains any local permits required by the City of Long Beach;
- Provides documentation to the City of Long Beach that it has obtained any other necessary permits of water quality certifications for the discharge;
- Conducts monitoring of the discharge, if required by the City of Long Beach;
- Implements BMPs and/or control measures as specified in Table 7 or in the applicable BMP manual(s) as a condition of the approval to discharge into the MS4; and
- Maintains records of its discharge to the MS4, consistent with requirements in Table 7 or recommendations pursuant to the applicable BMP manual.

In 2001, the City revised its Long Beach Storm Water Management Program (LBSWMP). The LBSWMP is a comprehensive program containing several elements, practices, and activities aimed at reducing or eliminating pollutants in storm water to the maximum extent possible. Furthermore, the City's NPDES and Standard Urban Storm Water Mitigation Plan (SUSMP) regulations contained in Chapter 18.61 of the *LBMC* state that:

- A. The Building Official shall prepare, maintain, and update, as deemed necessary and appropriate, the NPDES and SUSMP Regulations Manual and shall include technical information and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the City deems necessary, for implementing the provisions of this chapter.
- B. The Building Official shall develop, as deemed necessary and appropriate, in cooperation with other City departments and stakeholders, informational bulletins, training manuals and educational materials to assist in the implementation of this chapter.

Project implementation would construct the MUST facility, which would include pretreatment wetlands, treatment facility, and storage/polishing pond, and 11 segments of conveyance facilities. All conveyance facilities associated with the proposed project would be constructed as either subsurface pipelines or as open channels. The conveyance facilities would not have the capacity to result in substantial amounts of impervious surfaces, and as such, would not result in runoff that would violate water quality standards or waste discharge requirements.

The MUST facility would be constructed on land that is currently vacant and unpaved (pervious). Thus, implementation of the MUST facility would result in an increase in impervious surfaces as compared to existing conditions which could result in urban runoff affecting water quality in the project area. However, the Long Beach MUST Project would result in substantial beneficial impacts pertaining to water quality, since it would divert and treat urban runoff from tributary areas in the project area that would otherwise discharge into the LA River. The proposed MUST facility would provide a solution to meeting clean water mandates, as required under the NPDES Permits, as well as under the LA River Total Maximum Daily Load (TMDL) requirements, which are overseen by the Los Angeles RWQCB, SWRCB, and the U.S. Environmental Protection Agency (USEPA) under the Clean Water Act. All first

¹ Los Angeles Regional Water Quality Control Board, *Order No. R4-2014-0024-A01, NPDES Permit No. CAS004003*, September 8, 2016.



flush and dry weather urban runoff directly from the MUST facility site would be contained on-site and directed through the project's treatment system, prior to discharge to the LA River.

Thus, with compliance with the requirements of the NPDES, SUSMP, Order No. R4-2014-0024-A01, and the LBSWMP, impacts related to water quality standards and waste discharge requirements during long-term operations would be less than significant. Implementation of the MUST would result in substantial benefits in water quality for the project area since it would result in the treatment of urban runoff prior to discharge to the LA River.

Mitigation Measures: No mitigation is required.

- b) ***Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?***

Less Than Significant Impact. The proposed project site exists within a developed, urbanized area. The proposed project would be constructed on vacant/open space land and within existing right-of-way. According to the *Seismic Safety Element* of the *General Plan*, the project site's depth to groundwater ranges from 60 feet to less than 10 feet. Construction activities include subgrade excavation for the MUST facility, which would extend to a maximum vertical depth of 30 feet below ground surface (bgs), and the conveyance facilities, which would extend to a maximum vertical depth of 15 feet bgs. Should dewatering be required, the project would be required to get a Dewatering Permit with the Los Angeles Regional Water Quality Control Board (Los Angeles RWQCB), which require treatment, as necessary prior to discharge to the storm drain system. These activities would not substantially deplete groundwater and impacts in this regard would be less than significant. Further, the conveyance facilities would be constructed as either underground pipelines or open channels and would not substantially increase impervious areas or have the capacity to affect groundwater supplies or recharge. The project occurs within a highly developed and urbanized portion of Long Beach, and no designated groundwater recharge basins or infrastructure occur in the project area. Although the impervious surface area at the MUST site would increase as compared to existing conditions, project implementation would not include any components that would directly affect groundwater. Therefore, the project would not have the capacity to interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or lowering of the groundwater table level. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- c) ***Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?***

Less Than Significant Impact. Soil disturbance would temporarily occur during project construction due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, and grading. Disturbed soils would be susceptible to high rates of erosion from wind and rain, resulting in sediment transport via storm water runoff from the project site.

The project would be subject to compliance with the requirements set forth in the NPDES Storm Water General Construction Permit for construction activities; refer to Response 4.9(a). Compliance with the NPDES, including preparation of a SWPPP would reduce the volume of sediment-laden runoff discharging from the site. The implementation of BMPs such as storm drain inlet protection and fiber rolls would reduce the potential for sediment and storm water runoff containing pollutants from entering receiving waters. Therefore, project implementation would not substantially alter the existing drainage pattern of the site during the construction process such that substantial erosion or siltation would occur. Impacts in this regard would be less than significant.



The long-term operation of the proposed MUST facility and associated conveyance facilities would not have the potential to result in substantial erosion or siltation on- or off-site. The proposed conveyance facilities would be constructed as either subsurface pipelines, or as vegetated open channels and would not have the capacity to result in substantial erosion.

In addition, the project would not substantially alter the existing topography or drainage patterns at the MUST facility site. As noted above in Response 4.9(a), above, first flush and dry weather urban runoff at the MUST facility would be conveyed through the project's treatment system. By capturing the first flush from the LA River, the conveyance systems and the MUST would reduce the amount of sediment reaching receiving waters. Runoff during storm events, from the project location, would be collected via an on-site drainage system and conveyed to the LA River, similar to existing conditions. Since the land use is being converted from a vacant lot to an impervious surface, the amount of sedimentation during a storm event would be reduced compared to current conditions. As such, the project would not have the capacity to substantially alter drainage patterns in the project area, such that substantial erosion or siltation would occur on- or off-site. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- d) ***Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?***

Less Than Significant Impact. Refer to Response 4.9(c), above. The proposed conveyance facilities would be constructed as either subsurface pipelines, or as vegetated open channels and would not have the capacity to substantially alter drainage patterns that could result impacts related to flooding.

As noted above, the impervious surface area at the MUST facility site would increase; however, the project is not expected to result in substantial changes to drainage patterns since stormwater would be collected via an on-site drainage system that would be sized to adequately convey storm flows, and conveyed to the LA River, similar to existing conditions. As such, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- e) ***Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?***

Less Than Significant Impact. Refer to Responses 4.9(a), 4.9(c), and 4.9(d) above. The conveyance facilities would include below ground pipelines or open channels that would convey urban runoff to the MUST facility; no associated stormwater drainage improvements would be required as part of the conveyance improvements and no additional sources of polluted runoff would occur. Implementation of the MUST facility would result in a nominal increase in impervious surfaces as compared to existing conditions. However, the project is expected to result in beneficial water quality impacts as the treatment facility would collect dry-weather and "first flush" storm flows and treat the water prior to entering the LA River. Runoff during storm events would be collected via an on-site drainage system and conveyed to the LA River, similar to existing conditions. Water quality concerns associated with construction activities would be addressed through the Construction General Permit. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

- f) ***Otherwise substantially degrade water quality?***

Less Than Significant Impact. The proposed project is not anticipated to result in water quality impacts other than the potential impacts identified above in Responses 4.9(a) and 4.9(c). Water quality concerns associated with



construction activities would be addressed through the Construction General Permit. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the project area, the majority of the project site is located within "Zone X," within an area protected by levees from the one percent annual chance flood, which is outside of the 100-year flood hazard area. However, conveyance segment 8 is located within "Zone AH," which is in the 100-year flood hazard area.^{2,3,4,5,6} However, this segment would be constructed underground. Since the project area is outside of the 100-year flood hazard area (with the exception of segment 8) and no housing is proposed as part of the project, no impacts would result in this regard.

Mitigation Measures: No mitigation is required.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. Refer to Response 4.9(g).

Mitigation Measures: No mitigation is required.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact.

According to the *Public Safety Element* of the *General Plan*, the failure of structures that might cause flooding are dikes in the waterfront area of the City and flood-control dams which lie upstream from the City of Long Beach. Areas within 2 feet above mean sea level (msl) are considered most susceptible and areas over 2 feet up to 5 feet above msl are considered secondary flooding zones.

Three flood control dams lie upstream from the City: Sepulveda Basin, Hansen Basin, and Whittier Narrows Basin. The Sepulveda and Hansen Basins lie more than 30 miles upstream from where the LA River passes through the City. Due to the intervening low and flat ground and the distance involved, flood waters resulting from a dam failure at either of these reservoirs would be expected to dissipate before reaching the City of Long Beach. In the event of failure of the Whittier Narrows Dam while full, flooding could occur along both sides of the San Gabriel River where it passes through the City but would probably be most severe on the eastside of the river channel. Due to the infrequent periods of high precipitation and high river flow, the probability of flooding as a result of seismically induced failure of these structures is considered to be very low. Thus, impacts in this regard would be less than significant for the project area.

² Federal Emergency Management Agency, Flood Insurance Rate Map #06037C1815F, Panel 1815 of 2350, revised September 26, 2008.

³ Federal Emergency Management Agency, Flood Insurance Rate Map #06037C1960F, Panel 1960 of 2350, revised September 26, 2008.

⁴ Federal Emergency Management Agency, Flood Insurance Rate Map #06037C1955F, Panel 1955 of 2350, revised September 26, 2008.

⁵ Federal Emergency Management Agency, Flood Insurance Rate Map #06037C1962F, Panel 1962 of 2350, revised September 26, 2008.

⁶ Federal Emergency Management Agency, Flood Insurance Rate Map #06037C1964F, Panel 1964 of 2350, revised September 26, 2008.



Mitigation Measures: No mitigation is required.

j) ***Inundation by seiche, tsunami, or mudflow?***

Less Than Significant Impact. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of a sea floor associated with large, shallow earthquakes. Mudflows result from the downslope movement of soil and/or rock under the influence of gravity.

The LA River is located immediately west of the project site and the Long Beach Harbor and Pacific Ocean are located to the south. Based on the State of California *Tsunami Inundation Map for Emergency Planning, Long Beach Quadrangle*, conveyance segment 11 is situated within a tsunami inundation area.⁷ However, the conveyance facilities would be constructed underground or open channel, and would not involve any aboveground facilities that could result in hazards to human health or property. In addition, although the project site is located adjacent to the LA River, the risk of seiche is considered low due to the limited amount of water typically present in the river.

Due to the relatively flat and urbanized nature of the project area, inundation resulting from mudflows is not expected. A less than significant impact is anticipated in this regard.

Mitigation Measures: No mitigation is required.

⁷ California Geological Survey, *Tsunami Inundation Map for Emergency Planning, Long Beach Quadrangle*, Scale 1:24,000, March 1, 2009.



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4.10 LAND USE AND PLANNING

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?			✓	
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			✓	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

a) *Physically divide an established community?*

Less Than Significant Impact. The proposed project would occur within an entirely developed, urbanized area. Conveyance facilities associated with the project would be constructed as either subsurface pipelines or as open channels. Conveyance segments constructed as pipelines would be trenched, backfilled, and restored to existing conditions, and thus would not have the capacity to divide a community. Conveyance segments constructed as open channels would occur within vacant areas, and would not include structures or other features that could act as physical barriers segregating portions of the existing community. The MUST facility site would occur immediately adjacent to the eastern side of the LA River, which is an existing linear water feature that separates industrial areas on the west side of the River from communities to the east. As such, the MUST facility would not have the capacity to divide an established community. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

b) *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

Less Than Significant Impact.

City of Long Beach General Plan

As shown on Table 4.10-1, *General Plan Land Use Designations*, the *General Plan* designation for the MUST site is “LUD 9R; Restricted Industry,” “LUD 11; Open Space/Parks,” and “LUD 7; Mixed Use.” According to the *General Plan, Land Use Element*, the Restricted Industry land use “is intended to attract and maintain businesses which conduct industrial or manufacturing operations primarily indoors, with limited outdoor appurtenant activities.” The Open Space/Parks land use designation includes parks, plazas, promenades and boardwalks, vacant lots, cemeteries, community gardens, golf courses, beaches, flood control channels and basins, rivers and river levees, utility rights-of-way (e.g., transmission tower areas), oil drilling sites, median strips and back up lots, offshore islands, marinas, inland bodies of water, the ocean, estuaries and lagoons. The Mixed Use district encompasses a combination of land uses including employment centers such as retail, offices, medical facilities; high density residences; visitor-serving facilities; personal and professional services; or recreational facilities. The MUST facility would be consistent with these land use designations, and no General Plan Amendment would be required. As such, impacts in this regard would be less than significant.



Table 4.10-1
General Plan Land Use Designations

Designation	General Plan Land Use
MUST Facility	
9R	Restricted Industry
11	Open Space/Parks
7	Mixed Use
Conveyance Facilities	
1	Single Family
2	Mixed Style Homes
3A	Townhomes
4	High Density Residential
7	Mixed Use
8A	Traditional Retail Strip Commercial
8N	Shopping Nodes
9G	General Industry
9R	Restricted Industry
10	Institutions/Schools
11	Open Space/Parks
13	Right-of-Way

Given the wide geographical area spanned by the conveyance facilities, the proposed conveyance segments traverse a wide range of *General Plan* land use designations. [Table 4.10-1](#), provides a summary of the existing land use designations for the conveyance facilities. All conveyance facilities would be constructed entirely beneath ground surface, within existing public right-of-way or easements. As such, these facilities would be consistent with the General Plan designations provided below, and impacts would be less than significant in this regard.

City of Long Beach Zoning Ordinance

As shown in [Table 4.10-2, *Zoning Designations*](#), the zoning for the MUST facility site is “IL; Light Industrial,” “PD-21, Planned Development, Queensway Bay,” and “PD-30, Planned Development, Downtown Long Beach.” Based on the *LBMC*, Light Industrial zoning “allows a wide range of industries whose primary operations occur entirely within enclosed structures and which pose limited potential for environmental impacts on neighboring uses.” The Queensway Bay Planned Development Plan provides a flexible planning mechanism that allows mixed-use development to be built incrementally over time that is consistent with the intent of the Legislative grants of tide and submerged lands to the City of Long Beach and with the Port’s Master Plan. The Downtown Long Beach Planned Development Plan is based on “form-base code,” which changes the focus from traditional regulation characterized by a list of permitted uses to the design and character of the buildings and how they contribute to defining and activating the nearby public realm. The Plan includes the following topics: vision, connectivity and character, development standards, design standards, streetscape and public realm standards, sign standards, historic preservation, and plan administration. The MUST facility would be consistent with these zoning designations, and no Zone Change would be required. In addition, the MUST facility would be subject to the City’s standard site plan review process to ensure consistency with design standards associated with the IL, PD-21, and PD-30 districts. As such, impacts in this regard would be less than significant.

Given the wide geographical area spanned by the conveyance facilities, the proposed conveyance segments traverse a wide range of *LBMC* zoning designations. [Table 4.10-2](#), provides a summary of the existing zoning for the conveyance facilities. All conveyance facilities would be constructed entirely beneath ground surface, within existing public right-of-way or easements. As such, these facilities would be consistent with the zoning designations provided below, and impacts would be less than significant in this regard.



**Table 4.10-2
Zoning Designations**

Designation	Zoning
MUST Facility	
IL	Light Industrial
PD-21	Queensway Bay Planned Development
PD-30	Downtown Long Beach Planned Development
Conveyance Facilities	
CCA	Community Commercial Automobile-Oriented
CNA	Neighborhood Commercial Automobile-Oriented
I	Institutional
IG	General Industrial
IL	Light Industrial
P	Park
PD-6 (2)	Planned Development, Downtown Shoreline
PD-10	Planned Development, Wilmore City
PD-30	Planned Development, Downtown Long Beach
PR	Public Right-of-Way
R-1-L	Single-Family Residential, Large Lot
R-1-N	Single-Family Residential, Standard Lot
R-2-N	Two-Family Residential, Standard Lot
R-4-N	Medium-Density Multiple Residential
RM	Mobile Homes, Modular and Manufactured Residential
R-4-R	Moderate-Density Multiple Residential

California Coastal Act

The southerly extent of the project site (i.e., the southern portion of conveyance segment 11) is situated within the Coastal Zone. As such, the project would be required to comply with California Coastal Act (CCA) as administered by the California Coastal Commission (CCC). The project site is located in the City Permit Jurisdiction portion of the Coastal Zone, and therefore requires approval of a Local Coastal Development Permit (LCDP) from the City. According to the Local Coastal Program (LCP), the southern portion of conveyance segment 11 would be located within the Downtown Shoreline sub-area of the Long Beach coastal zone. The Downtown Shoreline sub-area is characterized by mid- to high-rise office and residential buildings and large scale public recreation and entertainment facilities. Public recreation, RV Park, parking, boat launch, nature preserve, wetlands, and State University and college offices are permitted uses within this area.

The only facilities associated with the proposed project that would occur within the Downtown Shoreline sub-area would be conveyance facilities (either subsurface pipeline or open channel facilities). No structures or other land uses that would be capable of conflicts with the CCA would occur. Moreover, the project would be subject to review by the City as part of the LCDP process, which would ensure consistency with the CCA. As such, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.



c) ***Conflict with any applicable habitat conservation plan or natural community conservation plan?***

No Impact. As stated in Response 4.4(f), the project site is not located within a Natural Community Conservation Plan (NCCP) and/or Habitat Conservation Plan (HCP).^{1,2} As such, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

¹ U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, *HCP/NCCP Planning Areas in Southern California*, October 2008.

² California Department of Fish and Wildlife, *California Regional Conservation Plans Map*, August 2015.



4.11 MINERAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			✓	
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			✓	

a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

Less Than Significant Impact. Historically, the primary mineral resources within the City of Long Beach have been oil and natural gas. However, oil and natural gas extraction has diminished over the last century as the resources have become depleted. Today, extraction operations continue, but on a reduced scale compared to past levels. The proposed project would include the MUST facility and associated conveyance facilities. According to Figure 9.6, *Mineral Resources*, of the *General Plan*, designated Mineral Resources Zones are identified in the vicinity of the project site and within the project footprint (as Oil and Gas Resources). However, the proposed project would not affect any existing oil, gas, or other mineral resource recovery facilities. Thus, development of the proposed project would not result in a loss of availability of the identified mineral resources. As such, less than significant impacts would result in this regard.

Mitigation Measures: No mitigation is required.

b) *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

Less Than Significant Impact. Refer to Response 4.11(a), above.

Mitigation Measures: No mitigation is required.



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4.12 NOISE

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		✓		
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		✓		
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air, and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear deemphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. On this scale, the human range of hearing extends from approximately 3 dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing; therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3 dBA and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6 dBA and about 7.5 dBA per doubling of distance.

There are a number of metrics used to characterize community noise exposure, which fluctuate constantly over time. One such metric, the equivalent sound level (L_{eq}), represents a constant sound that, over the specified period, has the same sound energy as the time-varying sound. Noise exposure over a longer period of time is often evaluated based on the Day-Night Sound Level (L_{dn}). This is a measure of 24-hour noise levels that incorporates a 10-dBA penalty for sounds occurring between 10:00 PM and 7:00 AM. The penalty is intended to reflect the increased human sensitivity to noises occurring during nighttime hours, particularly at times when people are sleeping and there are lower ambient noise conditions. Typical L_{dn} noise levels for light and medium density residential areas range from 55 dBA to 65 dBA.



Two of the primary factors that reduce levels of environmental sounds are increasing the distance between the sound source to the receiver and having intervening obstacles such as walls, buildings, or terrain features between the sound source and the receiver. Factors that act to increase the loudness of environmental sounds include moving the sound source closer to the receiver, sound enhancements caused by reflections, and focusing caused by various meteorological conditions.

REGULATORY SETTING

State of California

The State Office of Planning and Research *Noise Element Guidelines* include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The *Noise Element Guidelines* contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the Community Noise Equivalent Level (CNEL). A noise environment of 50 CNEL to 60 CNEL is considered to be of “normally acceptable” for residential uses. The Office of Planning and Research recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate.

City of Long Beach

Municipal Code

Chapter 8.80, *Noise*, of the *LBMC* sets forth all noise regulations controlling unnecessary, excessive, and annoying noise and vibration in the City. As outlined in Section 8.80.150 of the *LBMC*, maximum exterior noise levels are based on land use districts. According to the *Noise District Map* of the *LBMC*, the project site and surrounding uses are located within Receiving Land Use District One and Receiving Land Use District Four. District One is defined as “predominantly residential uses with other land use types also present” and District Four is defined as “predominantly industrial uses with other land use types also present.” Table 4.12-1, *Long Beach Noise Limits*, summarizes the exterior and interior noise limits for both District One and District Four.

**Table 4.12-1
Long Beach Noise Limits**

Land Use District	Exterior		Interior	
	Exterior Noise Level (Leq) 7 AM to 10 PM	Exterior Noise Level (Leq) 10 PM to 7 AM	Interior Noise Level (Leq) 7 AM to 10 PM	Interior Noise Level (Leq) 10 PM to 7 AM
District One	50	45	45	35
District Four	70	70	--	--
Notes: 1. District Four limits are intended primarily for use at their boundaries rather than for noise control within the district. 2. No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measures from any other property to exceed: <ul style="list-style-type: none"> – The noise standard for that land use district as specified in <u>Table 4.12-1</u> for a cumulative period of more than five (5) minutes in any hour; or – The noise standard plus five decibels (5 dB) for a cumulative period of more than one (1) minute in any hour; or – The noise standard plus ten decibels (10 dB) or the maximum measured ambient, for any period of time. 				
Source: City of Long Beach Municipal Code (<i>LBMC</i>), Section 8.80.160 and Section 8.80.170, 1977.				



Section 8.80.202, *Construction Activity – Noise Regulations*, of the LBMC specifies the following construction-related noise standards:

The following regulations shall apply only to construction activities where a building or other related permit is required or was issued by the Building Official and shall not apply to any construction activities within the Long Beach harbor district as established pursuant to Section 201 of the City Charter.

- A. *Weekdays and federal holidays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM and 7:00 AM the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this Section, a federal holiday shall be considered a weekday.*
- B. *Saturdays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, except for emergency work authorized by the Building Official.*
- C. *Sundays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.*
- D. *Owner's/employee's responsibility. It is unlawful for the landowner, construction company owner, contractor, subcontractor or employer of persons working, laboring, building, or assisting in construction to permit construction activities in violation of provisions in this Section.*
- E. *Sunday work permits. Any person who wants to do construction work on a Sunday must apply for a work permit from the Noise Control Officer. The Noise Control Officer may issue a Sunday work permit if there is good cause shown; and in issuing such a permit, consideration will be given to the nature of the work and its proximity to residential areas. The permit may allow work on Sundays, only between 9:00 AM and 6:00 PM, and it shall designate the specific dates when it is allowed.*

EXISTING STATIONARY SOURCES

The project area is urbanized and generally built-out. Surrounding uses in proximity to the project site consist of residential, industrial, recreational, commercial, transportation, open space, water land, and institutional uses. The primary sources of stationary noise in the project vicinity are urban-related activities (i.e., mechanical equipment associated with existing industrial uses). The noise associated with these sources may represent a single-event noise occurrence, short-term or long-term/continuous noise.

EXISTING MOBILE SOURCES

The majority of the existing noise from mobile sources in the project area is generated from vehicle sources along the adjacent roadways.

- a) ***Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***



Less Than Significant Impact With Mitigation Incorporated. It is difficult to specify noise levels that are generally acceptable to everyone; noise that is considered a nuisance to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels, or based on studies of the ability of people to sleep, talk, or work under various noise conditions. However, all such studies recognize that individual responses vary considerably. Standards usually address the needs of the majority of the general population.

As stated above, the *LBMC* includes some regulations controlling unnecessary, excessive, and annoying noise within the City. As outlined in the *LBMC*, maximum noise levels are based on land use districts.

Short-Term Noise Impacts

Construction activities generally are temporary and have a short duration, resulting in periodic increases in the ambient noise environment. Construction activities involving the installation of the treatment and conveyance facilities would be completed over the course of approximately four years (from 2018 through 2021). Construction of the conveyance facilities would occur incrementally and would not occur in one location for the entire construction period. Construction activities would include demolition, excavation/trenching, building construction, equipping, and paving. Ground-borne noise and other types of construction-related noise impacts typically occur during the initial demolition and earthwork phases. These phases of construction have the potential to create the highest levels of noise. Typical noise levels generated by construction equipment are shown in Table 4.12-2, *Maximum Noise Levels Generated by Construction Equipment*. It should be noted that the noise levels identified in Table 4.12-2 are maximum sound levels (L_{max}), which are the highest individual sound occurring at an individual time period. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

**Table 4.12-2
Maximum Noise Levels Generated by Construction Equipment**

Type of Equipment	Acoustical Use Factor ¹	L_{max} at 50 Feet (dBA)
Concrete Saw	20	90
Crane	16	81
Augur Drill Rig	20	85
Concrete Mixer Truck	40	79
Backhoe	40	78
Dozer	40	82
Excavator	40	81
Forklift	40	78
Paver	50	77
Roller	20	80
Tractor	40	84
Water Truck	40	80
Grader	40	85
General Industrial Equipment	50	85
Note: 1. Acoustical Use Factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.		
Source: Federal Highway Administration, <i>Roadway Construction Noise Model (FHWA-HEP-05-054)</i> , January 2006.		



Sensitive uses surrounding the project site include residential and institutional uses. Residential uses adjoin Segments 1-7, 9, and 10 and are located approximately 280 feet east of the proposed MUST facility. Jordan High School, located at 6500 Atlantic Avenue, adjoins Segments 2. Los Cerritos Elementary School, located at 515 West San Antonio Drive, adjoins Segment 5. Lafayette Elementary School, located at 2445 Chestnut Avenue, is approximately 330 feet east of Segment 6. Edison Elementary School, located at 625 Maine Avenue, is located approximately 245 feet east of the proposed MUST facility. These sensitive uses may be exposed to elevated noise levels during project construction.

Construction noise would be acoustically dispersed throughout the project site and not concentrated in one area near adjacent sensitive uses. Pursuant to the *LBMC*, all construction activities may only occur between the hours of 7:00 AM and 7:00 PM, Monday through Friday, and between the hours of 9:00 AM and 6:00 PM on Saturday. Construction activities are prohibited on Sundays and Federal holidays. Additionally, implementation of Mitigation Measure NOI-1 would further minimize impacts from construction noise as it requires the use of best management practices. Mitigation Measure NOI-1 requires construction equipment to be equipped with properly operating and maintained mufflers and other state required noise attenuation devices. Thus, a less than significant noise impact would result from construction activities.

Long-Term Off-Site Mobile Noise Impacts

The only long-term mobile noise associated with the proposed project would be generated through operation of the MUST facility. The proposed project would not substantially increase off-site mobile noise, since it only requires two shifts of three operators Monday through Friday, two shifts of two operators Saturday and Sunday, and the facility would be open to the public on a limited basis for educational tours. Therefore, project-related traffic would not substantially increase with implementation of the project. Although the project may result in a nominal number of trips associated with new employees and limited educational opportunities, the impact of these trips would be negligible. Thus, impacts in this regard would be less than significant.

Long-Term Stationary Noise Impacts

Upon project completion, noise in the project area would not significantly increase. The project involves construction of the MUST facility and associated conveyance facilities within an urbanized, built-out area. The proposed project would include 14 sump pumps associated with the conveyance facilities (i.e, diversion structures), in addition to treatment facility equipment/pumps, and heating, ventilation, and air conditioning (HVAC) equipment associated with the MUST facility, which would generate stationary source noise.

The sump pumps associated with the diversion structures would be constructed below ground surface within a vault. Since these pumps would be below grade, enclosed, electrically-powered, and of limited capacity (10 horsepower each), it is not anticipated that these pumps would have the capacity to exceed City noise standards and adversely affect adjacent uses.

The MUST facility would include treatment facility machinery, pumps and HVAC equipment. These facilities would be located at least 280 feet away from the closest sensitive receptor, which include residential uses. Typical water conveyance pumps generate approximately 90 dB at one meter (3.28 feet). Based on distance attenuation alone, pump levels would be approximately 72 dB at 25 feet and approximately 51 dBA at 280 feet, which is below the City's 70 dBA noise limit for District Four. Additionally, all pump and treatment equipment would be housed within enclosed structures or housed underground, which would further reduce noise levels by 24 to 39 dBA depending on the structure/enclosure type. Thus, under the worst-case scenario, pump and treatment equipment at the MUST Facility is anticipated to be less than 28 dBA at the nearest sensitive receptor, which is below the City's 50 dBA noise limit for District One.



Mechanical equipment noise, including HVAC, is typically 55 dBA at 50 feet from the source. As noted above, the nearest residential uses are located approximately 280 feet east of the proposed MUST facility. At this distance and height, potential noise from the HVAC unit would be approximately 40 dBA, which is below the City's 50 dBA noise limit for District One and 70 dBA noise limit for District Four. Therefore, noise generated by project operation is not anticipated to adversely affect adjacent land uses. Impacts during long-term operations would be less than significant.

Mitigation Measures:

NOI-1 Prior to Grading Permit issuance, the City of Long Beach City Engineer shall ensure that the project complies with the following:

- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.
- Property owners and occupants located within 100 feet of the project boundary shall be sent a notice, at least 15 days prior to commencement of construction of each phase, regarding the construction schedule of the proposed project. A sign, legible at a distance of 50 feet shall also be posted at the project construction site. All notices and signs shall be reviewed and approved by the City of Long Beach Development Services Department, prior to mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and a telephone number where residents can inquire about the construction process and register complaints.
- Prior to issuance of any Grading or Building Permit, the contractor shall provide evidence that a construction staff member will be designated as a Noise Disturbance Coordinator and will be present on-site during construction activities. The Noise Disturbance Coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the Noise Disturbance Coordinator shall notify the City within 24-hours of the complaint and determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City of Long Beach City Engineer. All notices that are sent to residential units immediately surrounding the construction site and all signs posted at the construction site shall include the contact name and the telephone number for the Noise Disturbance Coordinator.
- Prior to issuance of any Grading or Building Permit, the project applicant shall demonstrate to the satisfaction of the City of Long Beach City Engineer that construction noise reduction methods shall be used where feasible. These reduction methods include shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and electric air compressors and similar power tools.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant Impact. Project construction can generate varying degrees of ground-borne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment



generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.20 inch/second) appears to be conservative. The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. Typical vibration produced by construction equipment is illustrated in Table 4.12-3, Typical Vibration Levels for Construction Equipment.

**Table 4.12-3
Typical Vibration Levels for Construction Equipment**

Equipment	Approximate peak particle velocity at 15 feet (inches/second)	Approximate peak particle velocity at 25 feet (inches/second)	Approximate peak particle velocity at 280 feet (inches/second)
Large bulldozer	0.192	0.089	0.002
Loaded trucks	0.164	0.076	0.002
Small bulldozer	0.007	0.003	0.000
Jackhammer	0.075	0.035	0.001
Pile Driver - Impact (associated with construction of the MUST facility only)	3.266	1.518	0.041
Pile Driver – Sonic (associated with construction of the MUST facility only)	1.579	0.734	0.020

Notes:

1. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006. Table 12-2.
2. Calculated using the following formula:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$
 where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
 PPV (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
 D = the distance from the equipment to the receiver

The nearest structures to the project site are the residential uses adjoining Segments 1-7, 9, and 10. Pile driving would only be required during construction of the MUST facility, which is approximately 280 feet west of the nearest residential uses. Groundborne vibration decreases rapidly with distance. As indicated in Table 4.12-3, based on the FTA data, vibration velocities from typical heavy construction equipment operation that would be used during project construction range from 0.003 to 0.089 inch-per-second peak particle velocity (PPV) at 25 feet from the source of activity (this range does not include pile driving as this is only associated with construction of the MUST facility). With regard to the proposed project, groundborne vibration would be generated primarily during grading activities on-site and by off-site haul-truck travel. Although the adjacent residential uses are located approximately 15 feet of the



project site, the proposed construction activities would not be capable of exceeding the 0.2 inch-per-second PPV significance threshold for vibration, as construction activities would be limited and would not be concentrated within 15 feet of the adjoining structures for an extended period of time. As stated, pile driving would only be associated with construction of the MUST facility. At a distance of 280 feet, pile driving would not be capable of exceeding the 0.2 inch-per-second PPV significance threshold for vibration. Therefore, vibration impacts would be less than significant.

Mitigation Measures: No mitigation is required.

- c) ***A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?***

Less Than Significant Impact. Refer to Response 4.12(a) above.

Mitigation Measures: No mitigation is required.

- d) ***Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above the levels existing without the project?***

Less Than Significant Impact With Mitigation Incorporated. Refer to Response 4.12(a) above.

Mitigation Measures: Refer to Mitigation Measure NOI-1.

- e) ***For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

No Impact. The MUST facility site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest airport to the project site is the Long Beach Airport, located approximately 3.3 miles to the northeast of the proposed MUST facility at 4100 Donald Douglas Drive. In addition, the project site is located outside of the Long Beach Airport Influence Area.¹ Therefore, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

- f) ***For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?***

No Impact. There are no private airstrips located within the project area or in the vicinity. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

¹ Los Angeles County Airport Land Use Commission, *Long Beach Airport, Airport Influence Area Map*, May 13, 2003.



4.13 POPULATION AND HOUSING

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✓	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?		✓		

- a) ***Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?***

Less Than Significant Impact. A project could induce population growth in an area, either directly (for example, by proposing new homes and/or businesses) or indirectly (for example, through extension of roads or other infrastructure). No residential or business uses would be developed as part of the project. Therefore, the project would not induce direct population growth in the City through new development.

The proposed project would involve the construction of the MUST facility and associated conveyance facilities. The MUST facility could increase daytime employee population within the area. The employment created by the proposed project has the potential to result in an indirect growth in the City’s population, since the potential exists that “future employees” (and their families) may choose to relocate to the City. However, the MUST facility would only require two shifts of three operators Monday through Friday, and two shifts of two operators Saturday and Sunday. Any potential increase in population within the project area as a result of the project employment would be negligible. Additionally, housing opportunities exist for the project’s future employees in the communities surrounding the City. As such, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- b) ***Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?***

No Impact. It is anticipated that the project would occur entirely within existing public rights-of-way or easements. There is no existing housing on-site. As such, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

- c) ***Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?***

Less Than Significant Impact With Mitigation Incorporated. As noted above in Response 4.13(b), no housing would be affected or displaced as a result of the proposed project. However, portions of the project site are known to be occupied by the homeless. In order for construction of the proposed project to move forward, any homeless population existing within the construction impact area would be displaced.



Impacts related to the potential displacement of the homeless would be minimized to a level below significance through the implementation of Mitigation Measure PH-1. Mitigation Measure PH-1 would require that the City provide any potentially displaced homeless with access to support services intended to reduce homelessness throughout the City. The City of Long Beach Department of Health and Human Services provides assistance to homeless and chronically-homeless individuals and families in the Long Beach area. Assistance is provided as part of a collaborative that includes non-profit agencies, the Long Beach Police Department Quality of Life Unit, City of Long Beach Department of Mental Health, the faith-based community and other private entities. Services are aimed at reducing homelessness through outreach, case management and permanent housing placement. Through this collaborative, Mitigation Measure PH-1 would provide for coordinated/proactive outreach, medical/psychiatric assistance, provision of basic needs (e.g., hygiene, food, clothing, and transportation), access to emergency/temporary/permanent housing, and ongoing social services provide a linkage to continuum of care. Implementation of Mitigation Measure PH-1 would reduce potential displacement impacts to a less than significant level.

Mitigation Measures:

- PH-1 Prior to construction of project facilities in areas that would displace the homeless, the City of Long Beach Department of Health and Human Services shall provide advanced notice to the affected homeless population, and upon commencement of construction activities, shall provide outreach, assessment, and support services consistent with the City's practices to reduce homelessness in the Long Beach area. Support services shall include, but not be limited to, coordinated/proactive outreach, medical/psychiatric assistance, provision of basic needs (e.g., hygiene, food, clothing, and transportation), access to emergency/temporary/permanent housing, and ongoing social services provide a linkage to continuum of care.



4.14 PUBLIC SERVICES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1) Fire protection?			✓	
2) Police protection?			✓	
3) Schools?			✓	
4) Parks?			✓	
5) Other public facilities?			✓	

a) ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:***

1) ***Fire protection?***

Less Than Significant Impact. The Long Beach Fire Department (LBFD) provides fire protection within the City. The LBFD has 23 stations within the City of Long Beach. The nearest station to the project site is Fire Station 1, located at 100 Magnolia Avenue, approximately 0.65 mile southeast of the MUST facility site. Project implementation is not anticipated to increase response times to the project site or surrounding vicinity. Additionally, the overall project design would be subject to compliance with the requirements set forth in the 2016 California Fire Code (CFC), 2016 California Building Code (CBC) and *LBMC*, Title 18, *Building and Construction*, and LBFD requirements for fire access. The project plans for the MUST facility would be subject to LBFD site/building plan review, which would ensure adequate emergency access, fire hydrant availability, and compliance with all applicable codes.

The proposed project would construct a MUST facility and associated conveyance facilities. Conveyance facilities would be constructed below ground or as open channel facilities, and would not have the capacity to require fire protection services. However, the MUST facility would implement structures, water treatment facilities, and other equipment. The increase in development intensity could increase the demand for fire protection services at the project site. *LBMC* Chapter 18.23, *Fire Facilities Impact Fee*, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects. The purpose of such fees is to assure that the impacts created by proposed development pay its fair share of the costs required to support needed fire facilities and related costs necessary to accommodate such development. The amount of applicable fire facilities impact fee would be calculated based on the gross square feet of floor area and type of use and location in a non-residential development. Compliance with *LBMC* Chapter 18.23, which requires payment of fire facilities impact fee, would ensure that project implementation would result in a less than significant impact to fire protection services.

Project implementation is not anticipated to require the construction of new or physically altered fire protection facilities. Upon compliance with the existing CBC, CFC, *LBMC*, and LBFD design standards, impacts pertaining to fire hazards would be reduced to less than significant levels.



Mitigation Measures: No mitigation is required.

2) **Police protection?**

Less Than Significant Impact. The Long Beach Police Department (LBPd) provides law enforcement services to the City, including the project site. According to the *Police Reporting Districts Map*, prepared by the City of Long Beach, the MUST facility would be located within the South Police Division, Police Beat 6. This division operates out of a central location at 400 West Broadway, which is approximately 0.65 mile southeast of the project site (also known as the South Patrol Division).

Although the proposed project would generate a nominal number of new employees, it is not anticipated that this increase would have the capacity to result in a substantial adverse impact in relation to police services. Further, the proposed project would not introduce a use that would substantially increase the need for police response. As a result, project implementation is not anticipated to increase response times to the project site or surrounding vicinity, or require the construction of new or physically altered police protection facilities. In addition, the project would be subject to site plan review by the City prior to project approval to ensure that it meets City requirements in regards to safety (e.g., nighttime security lighting) to minimize the potential for safety concerns. Thus, impacts in this regard would be less than significant.

Moreover, *LBMC Chapter 18.22, Police Facilities Impact Fee*, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects. The purpose of such fees is to assure that the impacts created by proposed development pay its fair share of the costs required to support needed police facilities and related costs necessary to accommodate such development. The amount of applicable police facilities impact fee would be calculated based on the gross square feet of floor area and type of use and location in a non-residential development. Compliance with *LBMC Chapter 18.22*, which requires payment of police facilities impact fee, would ensure that project implementation would result in a less than significant impact to police protection services.

Mitigation Measures: No mitigation is required.

3) **Schools?**

Less Than Significant Impact. The area surrounding the MUST facility is served by the Long Beach Unified School District (LBUSD), which includes 84 public schools in the cities of Long Beach, Lakewood, Signal Hill, and Avalon on Catalina Island.¹ Edison Elementary School is located approximately 250 feet west of the MUST project site.

Implementation of the proposed project would increase employees to the site, which could increase population in the project vicinity; refer to Section 4.13, Population and Housing. However, the potential population increase would not result in the need for the construction of additional school facilities, as the project would not result in a substantial increase in population. However, the project would be subject to the requirements of Assembly Bill (AB) 2926 and Senate Bill (SB) 50, which allow school districts to collect impact fees from developers of new projects. According to Section 65996 of the California Government Code, development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation." Thus, upon payment of required fees by the project applicant consistent with existing State requirements, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures: No mitigation is required.

¹ Long Beach Unified School District, *About - Long Beach Unified School District*, <http://www.lbusd.k12.ca.us/District/>, accessed May 10, 2017.



4) **Parks?**

Less Than Significant Impact. The project does not propose new or physically altered parks or recreational facilities. However, the project would provide educational opportunities to the public. According to the City of Long Beach, Parks, Recreation, and Marine Department, the City maintains 162 parks and 26 community centers, among other programs and services. It should also be noted that the MUST facility and its proposed water features (i.e., pretreatment wetlands and storage pond) may become an integrated component of an expansion/improvement of Cesar E. Chavez Park located at 401 Golden Avenue (a separate project under development by the City's Parks, Recreation, and Marine Department). Although the project could indirectly increase population growth within the project vicinity, the nominal increase would not generate a demand for park facilities. In addition, the project would include features such as the open channel conveyance facilities, pretreatment wetlands, storage pond) that would provide vegetated open space features providing for enhanced recreational opportunities in the project area. Less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

5) **Other public facilities?**

Less Than Significant Impact. Library services for the project area are provided by the Long Beach Public Library. The Long Beach Public Library, located at 101 Pacific Avenue, is approximately 0.60 mile southeast of the MUST facility site. Although the project may result in a negligible increase in population growth within the project vicinity, the nominal increase would not generate a demand for library facilities. Less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation is required.



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4.15 RECREATION

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			✓	

- a) ***Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***

Less Than Significant Impact. Refer to Response 4.14(a)(4). The proposed project would not result in a substantial increase in demand for parks or other recreational facilities, and would not result in physical deterioration of these facilities. Less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

- b) ***Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?***

Less Than Significant Impact. The project does not include recreational facilities, nor would it require the construction or expansion of existing recreational facilities. It should also be noted that the MUST facility would include facilities that may result in enhanced recreational opportunities in the project area (i.e., open channel conveyance facilities, pretreatment wetlands, and storage pond). In addition, the MUST facility and its proposed water features (i.e., pretreatment wetlands and storage pond) may become an integrated component of an expansion/improvement of Cesar E. Chavez Park located at 401 Golden Avenue (a separate project under development by the City's Parks, Recreation, and Marine Department).

The existing LA River Bicycle Path runs along the easterly side of the River, immediately adjacent to the River levee along the entire project corridor. The only project construction activities occurring in the immediate vicinity of the existing path would occur at the MUST facility, in the vicinity of the Shoemaker Bridge. However, construction activities associated with the MUST facility would not affect the existing path, and the path would remain open to the public at all times.

A number of City-owned multi-use trails exist within and surrounding the MUST facility site. These trails generally provide for recreational activity and connectivity within the existing Cesar E. Chavez Park. In order to implement the MUST facility and associated pretreatment and storage ponds, a realignment of portions of these existing trails would be required. However, it is anticipated that the new segments of these realigned trails can be constructed while the existing trails remain open for use, and that closure of the trail system within this area would not be required. Moreover, as an integrated component of Cesar E. Chavez Park, the MUST facility would be designed to accommodate a proposed multi-use recreational trail network that would further enhance recreational opportunities in the project area. Thus, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.



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4.16 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			✓	
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			✓	
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✓
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		✓		
e. Result in inadequate emergency access?			✓	
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?		✓		

a) ***Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?***

Less Than Significant Impact. Implementation of the proposed project would result in the construction of the MUST facility and associated conveyance facilities. Short-term construction trips would include the transfer of construction equipment, construction worker trips, and hauling trips for construction material. It is expected that many of these construction-related trips would occur outside of the peak morning and evening congestion periods. The City of Long Beach regulates truck routes on the City roadways. Project related trucks must utilize designated truck routes near the project site. According to the Map 18, *Designated Truck Routes*, of the *Mobility Element* of the *General Plan*, Santa Fe Avenue/9th Street and Anaheim Street (west of I-710), and Long Beach Boulevard are designated as appropriate paths of travel for trucks. According to the *General Plan*, “trucks are prohibited from nontruck routes unless they are entering or exiting a property for business purposes or storage by the most direct route.” Given that construction-related trips would occur largely outside of the peak hour and would be short-term in nature, the classification of nearby roadways as appropriate truck routes, and adherence to the *General Plan* to use the most direct route of travel, short-term impacts would be less than significant.

Long-term operation of the conveyance facilities would not generate substantial vehicle trips along nearby roadways, since the conveyance facilities would only require occasional trips for the purposes of inspection and maintenance. Operation of the MUST facility would not generate substantial vehicle trips along nearby roadways, since the



proposed project would require nominal employment (only two shifts of three operators Monday through Friday and two shifts of two operators Saturday and Sunday). The facility would be open to scheduled tours and educational events. However, the tours and events would be infrequent, periodic, and would not involve substantial vehicle trips. Further, the tours and events are not anticipated to be conducted during peak traffic hours. Moreover, the project would not result in any change to roadway geometry or capacity on surrounding roadways. Therefore, long-term operational impacts would be less than significant.

Mitigation Measures: No mitigation is required.

- b) ***Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?***

Less Than Significant Impact. The 2010 Congestion Management Program (CMP) prepared by the Los Angeles Metropolitan Transportation Authority (Metro) is intended to address the impact of local growth on the regional transportation system for Los Angeles County. The CMP was created to link local land use decisions with their impacts on regional transportation and air quality. One of the primary reasons for defining and monitoring a CMP highway and roadway system is to assess the overall performance of the highway system in Los Angeles County and track changes over time. The nearest designed CMP highway to the project site is Interstate 710 (I-710). The proposed project may result in the generation of operational trips that could result in trips along I-710. However, the threshold for CMP analysis is 50 peak hour trips. Since the project would only require two shifts of three operators Monday through Friday, two shifts of two operators Saturday and Sunday, and the facility would be open to the public on a limited basis, peak hour trips are anticipated to be less than 50. Short-term construction process for the project would result in increase in traffic on the roadways in the project area; however, impacts in this regard would be temporary in nature and would cease upon project completion. Thus, the project would not create the potential for additional traffic that would conflict with an applicable CMP. Therefore, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- c) ***Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?***

No Impact. The nearest airport to the MUST site is the Long Beach Airport, located approximately 3.3 miles to the northeast of the project site at 4100 Donald Douglas Drive. Construction and operation of the proposed project would not increase the frequency of air traffic or alter air traffic patterns. No impacts are anticipated in this regard.

Mitigation Measures: No mitigation is required.

- d) ***Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

Less Than Significant Impact With Mitigation Incorporated. Implementation of the proposed project would result in the construction of the MUST facility and associated conveyance facilities. The proposed MUST facility would be constructed on existing vacant land, and would not alter the geometry on surrounding roadways, nor would it substantially increase hazards due to a design feature. Thus, impacts related to the MUST facility would be less than significant.

The project has the potential to result in safety hazards during the short-term construction process, since the project would include construction of the several conveyance facilities within roadway right-of-way (Segments 1 to 8). Although the roadways would remain open to traffic at all times, partial lane closures may be required. During periods when partial lane closures are required, the construction contractor would be required to implement a



temporary Traffic Management Plan (TMP) to minimize congestion and safety impacts during the construction process. The TMP would meet City of Long Beach traffic control guidelines, and would include potential measures such as construction signage, measures for pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use, among others. The TMP would provide congestion relief during short-term construction activities and ensure safe travel. Thus, with implementation of Mitigation Measure TR-1, impacts would be less than significant.

Mitigation Measures:

TR-1 Prior to the initiation of construction, the City of Long Beach Director of Public Works shall ensure that a Traffic Management Plan (TMP) has been prepared for the proposed project. The TMP shall include measures to minimize potential safety impacts during the short-term construction process, when partial lane closures may be required. It shall include measures such as construction signage, pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, identification of alternate bus stops during potential short-term bus stop closures, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use. The TMP shall be incorporated into project specifications for verification prior to final plan approval.

e) ***Result in inadequate emergency access?***

Less Than Significant Impact. Refer to Response 4.8(g), above.

Mitigation Measures: No mitigation is required.

f) ***Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?***

Less Than Significant Impact With Mitigation Incorporated. The proposed project would not conflict with any policies related to alternative forms of transportation. The project includes construction of the MUST facility and associated conveyance facilities. The conveyance facilities would be constructed within existing right-of-way. The MUST site is located within an area comprised of a variety of uses including industrial, residential, mixed use, and open space/park uses. As stated, the MUST facility would be accessed along Fairbanks Avenue. Currently, Fairbanks Avenue does not provide sidewalk facilities nor striped bicycle lanes. The Los Angeles River Bicycle Path, a Class I bike path, is located adjacent to the MUST facility along the east bank of the Los Angeles River. According to the *Mobility Element* of the *General Plan*, additional bike trails are present in the vicinity. Additionally, the City of Long Beach provides a bus route and bus stops along Magnolia Avenue, approximately 0.3 mile east of the MUST site. No modifications to the Los Angeles River Bicycle Path nor the bus stops would occur as part of the project.

Construction activities could temporarily impact the public transit and pedestrian facilities within the project vicinity. However, Mitigation Measure TRA-1 would require implementation of a TMP that would include potential measures such as construction signage, measures for pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use, among others. Thus, with implementation of Mitigation Measure TR-1, impacts would be less than significant.

Mitigation Measures: Refer to Mitigation Measure TR-1.



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4.17 TRIBAL CULTURAL RESOURCES

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			✓	
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✓		

As of July 1, 2015, California Assembly Bill 52 (AB 52) was enacted and expanded CEQA by establishing a formal consultation process for California tribes within the CEQA process. The bill specifies that any project may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to “begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project.” Section 21074 of AB 52 also defines a new category of resources under CEQA called “tribal cultural resources.” Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is either listed on or eligible for the California Register of Historical Resources or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource.

In compliance with AB 52, the City of Long Beach distributed letters to numerous Native American tribes notifying each tribe of the opportunity to consult with the City regarding the proposed project. The tribes were identified based on a list provided by the Native American Heritage Commission (NAHC), or were tribes that had previously requested to be notified of future projects proposed by the City. These letters were distributed on April 3, 2017. Two tribal response letters were received by the City; the Gabrielino Band of Mission Indians – Kizh Nation provided a letter to the City dated May 2, 2017 requesting consultation regarding the proposed project. The Tongva Ancestral Territorial Tribal Nation also responded and requested additional information pertinent to the cultural resources analysis; this information was provided but no further correspondence or request for consultation was received.

On February 19, 2016, the California Natural Resources Agency proposed to adopt and amend regulations as part of AB 52 implementing Title 14, Division 6, Chapter 3 of the California Code of Regulations, CEQA Guidelines, to include consideration of impacts to tribal cultural resources pursuant to Government Code Section 11346.6. On September 27, 2016, the California Office of Administrative Law approved the amendments to Appendix G of the CEQA Guidelines, and these amendments are addressed within this environmental document.



- a) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**
- 1) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or**

Less Than Significant Impact. Refer to Response 4.5(a). Based on the Cultural Report, the only historic resources determined to exist on-site are two segments of the Pacific Electric Railway, Long Beach Line, designated as the Pacific Electric Railway Freight Line (PERY Freight Line). The railroad segments recorded are thought to be at least 75 years old, possibly several years older. These resources were recommended as not eligible for the California Register of Historical Resources or other local register, and thus do not meet the definition of a tribal cultural resource. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- 2) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Less Than Significant Impact With Mitigation Incorporated. As noted above, the City of Long Beach solicited consultation with potentially affected Native American tribes (as applicable) regarding the proposed project in accordance with AB 52. Two tribal response letters were received by the City; the Gabrielino Band of Mission Indians – Kizh Nation provided a letter to the City dated May 2, 2017 requesting consultation regarding the proposed project, and that the tribe has requested the presence of a Native American monitor during ground disturbing activities associated with the project. Based on the results of the consultation between the City and the Gabrielino Band of Mission Indians – Kizh Nation, the City has indicated it is amenable to the presence of a tribal observer during construction activities. The Tongva Ancestral Territorial Tribal Nation also responded and requested additional information pertinent to the cultural resources analysis; this information was provided but no further correspondence or request for consultation was received.

Given the level of previous disturbance within the project site, it is not expected that any tribal cultural resources remain within the shallow soils on-site due to the placement of fill material. However, construction of the proposed project would require grading and excavation activities and may have the potential to encounter native soils, which may contain undiscovered tribal cultural resources. In the unlikely event resources are discovered during ground-disturbing activities, compliance with Mitigation Measure CUL-1, which provides instructions in the event a material of potential cultural significance is uncovered, would reduce potential impacts to a less than significant level.

Mitigation Measures: Refer to Mitigation Measure CUL-1.



4.18 UTILITIES AND SERVICE SYSTEMS

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✓	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			✓	

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The State Water Resource Control Board (SWRCB) works in coordination with the Regional Water Quality Control Boards (RWQCBs) to preserve, protect, enhance, and restore water quality. The City is within the jurisdiction of the Los Angeles RWQCB. The Los Angeles County Sanitation District (LACSD) oversees treatment facilities that serve the City. The LACSD constructs, operates, and maintains facilities to collect, treat, recycle, and dispose of sewage and industrial wastes. Sewer services for the project site are provided by the Long Beach Water Department (LBWD). The LBWD operates and maintains nearly 765 miles of sanitary sewer lines, delivering over 40 million gallons per day (mgd) to Los Angeles County Sanitation Districts (LACSD) facilities located on the north and south sides of the City.¹ From these facilities, treated sewage would be used in one of three ways: 1) to irrigate parks, golf courses, cemeteries, and athletic fields, 2) recharge the City's groundwater basin, or 3) pumped into the Pacific Ocean.²

Currently, a majority of the City's wastewater is delivered to the Joint Water Pollution Control Plant (JWPCP) of the LACSD. The remaining portion of the City's wastewater is delivered to the Long Beach Water Reclamation Plant of the LACSD. JWPCP is located approximately 5 miles northwest of the MUST site at 24501 South Figueroa Street in the City of Carson. The plant occupies approximately 420 acres to the east of the Harbor (110) Freeway.³ The JWPCP is the largest of the LACSDs' wastewater treatment plants. It provides both primary and secondary treatment for 280 mgd of wastewater.⁴ The plant serves a population of approximately 3.5 million people, including

¹ Long Beach Water Department, *Sewage Treatment*, <http://www.lbwater.org/sewage-treatment>, accessed April 26, 2017.

² Ibid.

³ Joint Water Pollution Control Plant website, <http://www.lacsd.org/wastewater/wwfacilities/jwpcp/>, accessed April 26, 2017.

⁴ Joint Water Pollution Control Plant website, <http://www.lacsd.org/wastewater/wwfacilities/jwpcp/>, accessed April 26, 2017.



most of the 460,000 residents of the City.⁵ At JWPCP, the treated wastewater is disinfected with chlorine and sent to the Pacific Ocean through networks of outfalls that extend 1.5 miles off the Palos Verdes Peninsula to a depth of 200 feet.⁶ The Long Beach Water Reclamation Plant is located at 7400 East Willow Street in the City of Long Beach, approximately 7 miles to the northeast of the MUST site. The plant occupies 17 acres west of the San Gabriel River (605) Freeway.⁷ The plant provides primary, secondary, and tertiary treatment for 25 mgd of wastewater.⁸ The plant serves a population of approximately 250,000 people, including a portion of the 460,000 residents of the City.⁹

Implementation of the proposed project would result in construction of the MUST facility and associated conveyance facilities. The only potential for project-related generation of wastewater would occur as part of restroom facilities proposed at the MUST facility. The restrooms would accommodate on-site employees, in addition to the general public and visitors to the site. The proposed project would entail two shifts of three operators Monday through Friday and two shifts of two operators Saturday and Sunday. The MUST facility would include restroom facilities that would be open to the public from 8:00 a.m. to 5:00 p.m. The proposed restroom facilities would be subject to limited use, and it is not anticipated that substantial amounts of wastewater would be generated. The LACSD is responsible for meeting all State and Federal wastewater treatment requirements. As part of any new development project, the LACSD would charge a standard sewer connection fee that would assist LACSD in ensuring that sufficient capacity is available and that the wastewater treatment requirements of the Los Angeles RWQCB are met. Thus, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required.

- b) ***Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

Less Than Significant Impact. The LBWD maintains and operates its own municipal water system, and would continue to provide water service within the project area. Impacts regarding wastewater treatment facilities are described in Response 4.18(a), above. The MUST facility would include restroom facilities. As stated in Response 4.18(a), the LACSD would charge a standard sewer connection fee that would assist LACSD in ensuring that sufficient capacity is available and that the wastewater treatment requirements of the Los Angeles RWQCB are met. Refer to Response 4.18(d), below, for a discussion of water supply impacts. Although the project may result in an increase in water demand due the proposed public restrooms and components of the urban runoff treatment process, the City and MWD UWMPs demonstrate that adequate supply is available to serve the City through the long-range year of 2040. As such, it is not anticipated that any water or wastewater facilities would be required to serve the project that would result in a significant environmental effect. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- c) ***Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

Less Than Significant Impact. The proposed project would involve the construction of a new MUST facility on vacant, disturbed land, and construction of the conveyance facilities within existing right-of-way/easements. The conveyance facilities would include pipelines or open channels that would convey urban runoff to the MUST facility; no associated stormwater drainage improvements would be required as part of the conveyance improvements.

⁵ Ibid.

⁶ Ibid.

⁷ Los Angeles County Sanitation District, *Long Beach Water Reclamation Plant*, http://www.lacsd.org/wastewater/wwfacilities/joint_outfall_system_wrp/long_beach.asp, accessed April 26, 2017.

⁸ Ibid.

⁹ Ibid.



Although the MUST facility would include a nominal increase in impervious surface area, the project would not result in the construction or expansion of existing storm water drainage facilities that could cause significant impacts. As noted in Response 4.9(a), first flush and dry weather urban runoff at the MUST facility would be conveyed through the project's treatment system. Runoff during storm events would be collected via an on-site drainage system and conveyed to the LA River, similar to existing conditions. Therefore, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- d) ***Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

Less Than Significant Impact. Long Beach receives its potable (drinking) water supply from two main sources, groundwater and imported water. Approximately 60 percent of the City's water supply is produced from groundwater wells located within the City.¹⁰ The remainder of the City's potable water supply is treated surface water purchased from the Metropolitan Water District of Southern California (MWD). This water originates from two sources: the Colorado River, via the 242-mile Colorado River Aqueduct and Northern California's Bay-Delta region, via the 441-mile California Aqueduct.¹¹ Long Beach satisfies non-potable water demand through reclaimed water supplies. Reclaimed water originates from the Long Beach Water Reclamation Plant. The water produced at the Long Beach Water Reclamation Plant comes from sewage water that is treated to a quality standard that is suitable for irrigating parks, golf courses, and other outdoor landscapes.

According to the City's 2015 Urban Water Management Plan (UWMP), the City's projected water demand is 76,983 acre-feet per year (AFY) consisting of 35,100 AFY from MWD wholesale purchases, 32,693 AFY from groundwater, and 9,190 AFY from recycled water.¹² The UWMP projects that water demand in 2040 will increase to 79,291 AFY. The UWMP includes an analysis of water supply reliability projected through 2040. Based on the analysis, the City would be capable of providing adequate water supply to its service area under a normal supply and demand scenario, single dry-year supply and demand scenario, and multiple dry-year supply and demand scenario through 2040. Furthermore, the MWD 2015 UWMP states that the MWD "has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under the single dry-year and multiple dry-year hydrologic conditions."¹³ Thus, the City and MWD UWMPs account for increased demand as growth within the City occurs.

Although the MUST facility may result in an increase in water demand due the proposed public restrooms and on-site water usage required for treatment plant operations, the City and MWD UWMPs demonstrate that adequate supply is available to serve the City through the long-range year of 2040. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- e) ***Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

Less Than Significant Impact. Refer to Response 4.18(a), above.

Mitigation Measures: No mitigation is required.

¹⁰ Long Beach Water Department, *The Groundwater Supply, A Brief History*, <http://www.lbwater.org/groundwater-supply-brief-history>, accessed May 17, 2017.

¹¹ Long Beach Water Department, *Sources of Water*, <http://www.lbwater.org/sources-water>, accessed May 17, 2017.

¹² Long Beach Water Department, *2015 Urban Water Management Plan*, June 2, 2016.

¹³ Metropolitan Water District of Southern California, *2015 Urban Water Management Plan*, June 2016.



- f) ***Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

Less Than Significant Impact. Implementation of the proposed project would result in construction of the MUST facility and associated conveyance facilities. The project would not include any habitable structures. The primary disposal facility for the proposed project is anticipated to be the Falcon Refuse Center, Inc., located at 3031 East 'I' Street, Wilmington, approximately 1.3 miles northwest of the MUST facility. This facility is a 5.7-acre large volume transfer station/processing facility and accepts construction and demolition waste, green materials, industrial, inert, and mixed municipal waste.¹⁴ Once the waste has been processed at Falcon Refuse Center, Inc., waste would be transferred to a nearby landfill for disposal. The nearest landfill to the project site that would handle solid waste and recycling for the project is Savage Canyon Landfill located at 13919 East Penn Street in the City of Whittier, approximately 17 miles to the northeast of the project site. The Savage Canyon Landfill has a daily permitted capacity of 3,350 tons per day and a maximum permitted capacity of 19,337,450 cubic yards (with a remaining capacity of 9,510,833 cubic yards).

Demolition and construction activities associated with the proposed development would generate construction debris (soil, asphalt, demolished materials, etc.). However, the generation of these materials would be short-term in nature and would not have the capability to substantially affect the capacity of regional landfills. Additionally, the proposed project operational activities is not expected to substantially increase the volume of solid waste generated by the project over existing conditions, since the project would only require two shifts of three operators Monday through Friday and two shifts of two operators Saturday and Sunday. The facility would be open to scheduled tours and educational events. However, the tours and events would infrequent and periodic. As a result, once construction is completed, the facility would generate minimal amount of waste. Thus, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

- g) ***Comply with federal, state, and local statutes and regulations related to solid waste?***

Less Than Significant Impact. The County of Los Angeles prepares and administers solid waste management plans to project the capacity of the County's landfills and other facilities to accommodate future solid waste demand generated by future development. Local jurisdictions, including the City of Long Beach, are required to assess the effect of new development on the County's facilities and develop and implement programs to reduce the amount of solid waste generated within their boundaries that requires disposal at such facilities.

The City is required to comply with Assembly Bill 939 (AB 939) which recognizes that an integrated approach to waste management is effective in extending the life of existing landfills and preventing the need to devote additional valuable land resources to trash disposal. The City is required to comply with AB 939 provisions and any related legislation that may be enacted. The City participates in a variety of efforts to meet the AB 939 source reduction, recycling, and composting requirements. Nation's Best Environmental Services Bureau (Bureau) for Long Beach is provided through the City's Public Works Department. The Bureau provides several websites and a monthly e-newsletter called *LB EcoGuide* to inform and educate the local community of recycling, refuse collection, and hazardous waste requirements and events, as well as street sweeping and parking enforcement and donation opportunities. The project would comply with adopted programs and federal, State, and local regulations pertaining to solid waste, including the *LBMC Chapter 50, Solid Waste Management*, and Chapter 53, *Construction and Demolition Materials Management*. With compliance with the *LBMC*, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

¹⁴ CalRecycle, Facility/Site Summary Details: Falcon Refuse Center, Inc. (19-AR-0302), <http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AR-0302/Detail/>, accessed May 17, 2017.



4.19 MANDATORY FINDINGS OF SIGNIFICANCE

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		✓		
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		✓		

- a) ***Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?***

Less Than Significant Impact With Mitigation Incorporated. As shown within Section 4.4, Biological Resources, construction of the proposed MUST facilities would occur within an urbanized and fully developed area. The project site would be located on vacant disturbed land or within existing public right-of-way/easements. The project would not result in direct impacts to any sensitive species or wildlife habitat and impacts to sensitive biological resources would be less than significant. Since the proposed project may result in the removal of disturbed habitat and ornamental vegetation in various locations of the project site, the proposed project could result in potential impacts to nesting birds protected by the Migratory Bird Treaty Act (MBTA). Mitigation Measure BIO-1 has been included in order to minimize potential impacts to nesting birds in the event any mature trees are affected during the avian nesting season.

In addition, as described within Section 4.5, Cultural Resources, and Section 4.17, Tribal Cultural Resources, the project site has been completely disturbed and has been subject to ground disturbance in the past. As such, any historical and archaeological resources which may have existed in the project area have likely been disturbed. However, Mitigation Measures CUL-1 would be required in the event unexpected resources are uncovered during the grading and excavation process. The project site is however paleontologically sensitive for all excavations more than five feet in depth and planned excavations range from 15 to 30 feet below the current surface. As such, Mitigation Measure CUL-2 would require a Paleontological Resources Management Plan providing paleontological resources awareness training, framework for evaluating fossils recovered for significance under CEQA, and curation agreement with an accredited museum. With implementation of recommended mitigation, the project is not anticipated to eliminate important examples of the major periods of California history or prehistory. Thus, impacts in this regard would be less than significant.



- b) ***Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?***

Less Than Significant Impact With Mitigation Incorporated. The proposed project would include construction of the treatment and conveyance facilities. The project would not result in substantial population growth within the area, either directly or indirectly. Although the project may incrementally affect other resources that were determined to be less than significant, the project’s contribution to these effects is not considered “cumulatively considerable,” in consideration of the relatively nominal impacts of the project and mitigation measures provided.

- c) ***Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?***

Less Than Significant Impact With Mitigation Incorporated. Previous sections of this Initial Study reviewed the proposed project’s potential impacts related to aesthetics, air quality, geology and soils, greenhouse gases, hydrology/water quality, noise, hazards and hazardous materials, traffic, and other issues. As concluded in these previous discussions, the proposed project would result in less than significant environmental impacts with implementation of the recommended mitigation measures. Therefore, the proposed project would not result in environmental impacts that would cause substantial adverse effects on human beings.



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5.0 INVENTORY OF MITIGATION MEASURES

AESTHETICS

AES-1 Construction equipment staging areas shall be located, to the greatest extent feasible, away from nearby existing sensitive viewers (e.g., resident, pedestrians/bicyclists, and motorists), and shall utilize appropriate screening (i.e., temporary fencing with opaque material) to shield public views of construction equipment and material. Prior to issuance of a grading permit, the City of Long Beach City Engineer shall verify that staging locations are identified on final grading/development plans and that appropriate perimeter screening is included as a construction specification.

AES-2 The City of Long Beach shall ensure that any exterior lighting does not spill over onto adjacent uses. Prior to issuance of any building permit, an Outdoor Lighting Plan shall be prepared and submitted to the City of Long Beach Development Services Department, for review and approval, that includes a footcandle map illustrating the amount of light from the proposed project at adjacent light sensitive receptors. All exterior light fixtures shall be shielded or directed away from adjoining uses.

AIR QUALITY

AQ-1 Prior to issuance of any Grading Permit, the City of Long Beach City Engineer shall confirm that the Grading Plan and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered every three hours during daily construction activities and when dust is observed migrating from the project site to prevent excessive amounts of dust;
- Pave or apply water every three hours during daily construction activities or apply non-toxic soil stabilizers on all parking areas and staging areas. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;
- Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered three times daily, or non-toxic soil binders shall be applied;
- All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
- Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
- Track-out devices such as gravel bed track-out aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes;
- On-site vehicle speed shall be limited to 15 miles per hour;



- Visible dust beyond the property line which emanates from the project shall be prevented to the maximum extent feasible;
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site; and
- Trucks associated with soil-hauling activities shall avoid residential streets and utilize City-designated truck routes to the extent feasible.

BIOLOGICAL RESOURCES

BIO-1 If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from January 1 - August 31), a pre-construction clearance survey for nesting birds shall be conducted twice per week during the three weeks prior to the scheduled vegetation clearance.

The biologist conducting the clearance survey shall document the negative results if no active bird nests are observed on the project site or within the vicinity during the clearance survey with a brief letter report indicating that no impacts to active bird nests would occur before construction can proceed. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Results of the pre-construction survey and any subsequent monitoring shall be provided to the California Department of Fish and Wildlife (CDFW) and other appropriate agencies.

BIO-2 Prior to any construction activities affecting jurisdictional waters of the U.S. or State, the City of Long Beach shall conduct a jurisdictional delineation (JD) for the proposed project to quantify impacts to jurisdictional features, pursuant to Section 404 of the Federal Clean Water Act (CWA), Section 1600 of the California Fish and Game Code, and Section 401 of the CWA. Based on the results of the JD, the City of Long Beach shall consult with the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board to obtain regulatory permits, as necessary based on project impacts. In consultation with the regulatory agencies, compensatory mitigation for jurisdictional impacts shall be provided at a minimum 1:1 ratio, or as directed in accordance with existing agency requirements.

CULTURAL RESOURCES

CUL-1 If evidence of cultural resources is found during excavation, vegetation clearance, and other ground disturbing activities, activity in that area shall cease and the construction contractor shall contact the City of Long Beach Development Services Department. With direction from the Development Services Department, an archaeologist certified by the County of Los Angeles shall be retained to evaluate the discovery prior to resuming grading in the immediate vicinity of the find. If warranted, the archaeologist shall develop a plan of mitigation which may include, but shall not be limited, to, salvage excavation, laboratory analysis and processing, research, curation of the find in a local museum or repository, and preparation of a report summarizing the find.

CUL-2 Prior to construction, a Paleontological Resources Management Plan shall be prepared for the proposed project. The Paleontological Resources Management Plan shall include paleontological resources awareness training for earthmoving personnel, provide a rationale for spot-checking to determine when sediments suitable for fossil preservation have been reached in each location and



implement monitoring at that point. The plan shall also provide a framework for evaluating fossils recovered for significance under CEQA. Fossils meeting significance criteria shall be prepared, identified by a paleontologist certified by the County of Los Angeles and submitted for curation at an accredited museum such as the Natural History Museum of Los Angeles County. The City of Long Beach Development Services Department shall ensure that the requirement for preparation of the Paleontological Resources Management Plan is identified on project plans and specifications.

HAZARDS AND HAZARDOUS MATERIALS

HAZ-1 The City of Long Beach shall retain a qualified California-Registered Geologist or a California-Registered Civil Engineer to prepare a Soils Management Plan (SMP) prior to the issuance of any grading permit at or near the property located at 960 De Forest Avenue, Long Beach. As part of the SMP, the qualified professional shall notify the Los Angeles Regional Water Quality Control Board (RWQCB) of proposed activities at this property. The SMP shall include, but not be limited to:

- Land use history, including description and locations of known contamination;
- The nature and extent of previous investigations and remediation at the site;
- Identified areas of concern at the site, in relation to proposed activities;
- A listing and description of institutional controls, such as the City's excavation ordinance and other local, state, and federal regulations and laws that would apply to the project;
- Names and positions of individuals involved with soils management and their specific role;
- An earthwork schedule;
- Requirements for site-specific Health and Safety Plans (HSPs) to be prepared by all contractors at the project site. The HSP should be prepared by a Certified Industrial Hygienist and would protect onsite workers by including engineering controls, personal protective equipment, monitoring, and security to prevent unauthorized entry and to reduce construction related hazards. The HSP should address the possibility of encountering subsurface hazards including hazardous waste contamination and include procedures to protect workers and the public;
- Hazardous waste determination and disposal procedures for known and previously unidentified contamination, including those associated with any soil export activities, if applicable;
- Requirements for site specific techniques at the site to minimize dust, manage stockpiles, run-on and run-off controls, waste disposal procedures, etc.; and
- Copies of relevant permits or closures from regulatory agencies.

HAZ-2 If potentially contaminated soil is identified during site disturbance activities for the project, as evidenced by discoloration, odor, detection by instruments, or other signs, a qualified California-Registered Geologist or a California-Registered Civil Engineer retained by the City of Long Beach shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project applicant, representatives of the Los Angeles Regional Water Quality Control Board (RWQCB), and City of Long Beach stating the recommended course of action.



Depending on the nature and extent of contamination, the professional engineer or professional geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If, in the opinion of the professional engineer or professional geologist, substantial remediation may be required, the City of Long Beach shall contact representatives of the Los Angeles RWQCB for guidance and possible oversight.

HAZ-3 Prior to issuance of a Dewatering Permit for the proposed project, a Construction Workers Safety Plan (CWSP) shall be developed by a qualified California-Registered Geologist or a California-Registered Civil Engineer, retained by the City of Long Beach. At a minimum, the CWSP shall include guidance for handling, segregating, and characterizing potentially contaminated groundwater extracted during dewatering activities in order to minimize impacts to worker safety and the environment. The CWSP shall also require that the Contractor comply with any requirements made by a Dewatering Permit issued by the Los Angeles Regional Water Quality Control Board (RWQCB), as applicable.

HAZ-4 Prior to site disturbance activities, the City of Long Beach shall retain a lead specialist to conduct sampling activities to verify whether or not on-site traffic striping materials are associated with lead-based paints above regulatory thresholds. The lead specialist shall report the findings to the City of Long Beach City Engineer, and shall include recommendations for the construction contractor regarding proper handling and disposal of materials, if necessary.

HAZ-5 At least three business days prior to any lane closure, the construction contractor shall notify the Long Beach Fire Department (LBFD) and Long Beach Police Department (LBPD), along with the City of Long Beach City Engineer, of construction activities that would impede movement (such as lane closures) along public roadways in the project area, in order to ensure uninterrupted emergency access and maintenance of evacuation routes. This requirement shall be indicated on project plans and specifications, subject to verification by the City of Long Beach City Engineer.

NOISE

NOI-1 Prior to Grading Permit issuance, the City of Long Beach City Engineer shall ensure that the project complies with the following:

- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.
- Property owners and occupants located within 100 feet of the project boundary shall be sent a notice, at least 15 days prior to commencement of construction of each phase, regarding the construction schedule of the proposed project. A sign, legible at a distance of 50 feet shall also be posted at the project construction site. All notices and signs shall be reviewed and approved by the City of Long Beach Development Services Department, prior to mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and a telephone number where residents can inquire about the construction process and register complaints.
- Prior to issuance of any Grading or Building Permit, the contractor shall provide evidence that a construction staff member will be designated as a Noise Disturbance Coordinator and will be present on-site during construction activities. The Noise Disturbance Coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the Noise Disturbance Coordinator shall notify the City within 24-hours of the complaint and determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed



acceptable by the City of Long Beach City Engineer. All notices that are sent to residential units immediately surrounding the construction site and all signs posted at the construction site shall include the contact name and the telephone number for the Noise Disturbance Coordinator.

- Prior to issuance of any Grading or Building Permit, the project applicant shall demonstrate to the satisfaction of the City of Long Beach City Engineer that construction noise reduction methods shall be used where feasible. These reduction methods include shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and electric air compressors and similar power tools.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

POPULATION AND HOUSING

PH-1 Prior to construction of project facilities in areas that would displace the homeless, the City of Long Beach Department of Health and Human Services shall provide advanced notice to the affected homeless population, and upon commencement of construction activities, shall provide outreach, assessment, and support services consistent with the City's practices to reduce homelessness in the Long Beach area. Support services shall include, but not be limited to, coordinated/proactive outreach, medical/psychiatric assistance, provision of basic needs (e.g., hygiene, food, clothing, and transportation), access to emergency/temporary/permanent housing, and ongoing social services provide a linkage to continuum of care.

TRANSPORTATION/TRAFFIC

TR-1 Prior to the initiation of construction, the City of Long Beach Director of Public Works shall ensure that a Traffic Management Plan (TMP) has been prepared for the proposed project. The TMP shall include measures to minimize potential safety impacts during the short-term construction process, when partial lane closures may be required. It shall include measures such as construction signage, pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, identification of alternate bus stops during potential short-term bus stop closures, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use. The TMP shall be incorporated into project specifications for verification prior to final plan approval.



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